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THE VOCABULARY OF A THREE-YEAR-OLD BOY WITH SOME INTERPRETIVE COMMENTS

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The vocabularies of children have such obvious psychological and pedagogical interest that we deem it scarcely necessary to apologize for adding another to the already numerous lists that have been published,[1] particularly since we ourselves have been greatly aided in our observation of the linguistic development of our own child by the inspection of the vocabularies of other children of his age, and since the majority of the published lists have been obtained from children of but two years of age, so that we have relatively little information concerning the growth of the child's vocabulary during his third year.

BIOGRAPHICAL

The child Richard, whose vocabulary up to three years of age is here presented, has been the only child in the family since his birth. He is in every way a normal child, but perhaps somewhat farther advanced in general physical and mental development than the average child of his age.

As it is of interest to examine the relation between linguistic and general physical and mental development, we note here certain data with reference to the time of appearance of the most significant developmental 'landmarks,' physical growth, dentition, the acquisition of locomotion, beginnings of speech, etc.

Weight at birth, 9.3 lbs., at 6 months, 16.7 lbs., at 12 months, 23.2 lbs., at 2 years, 30.5 lbs., at 3.6 years (date of writing) 38.8 lbs. Height at 3.6 years, 39 inches.

First two teeth, 4.5 months; 8 teeth, 7.7 months; 16 teeth, 13 months; 20 teeth, 21 months.

[1] See, for example, Nos. 4, 5, 8, 9, 10, 11, 18 and 19 of the references at the close of this article.

Crept backwards, 6 months; creeping forward perfected, 7.5 months; first stood by holding with but one hand, 9.5 months; walked by holding with hands, 9.7 months; stood alone, 11 month; first step alone, 13.5 months; ten steps alone, 5 days later.

R's linguistic development is more difficult to state accurately. First certain indication that the meaning of a phrase was understood, 9 months; imitation began to be very active at 9 months; date of pronouncing first word is unknown: he said "mamma" at 7.5 months, but this may have been mere accident; four words were pronounced at 11.5 months; 15 words had been used at 1 year; six-word sentences were used at 20 months; on his 2d birthday the attempt to record the words used during the day was relinquished because during the first fifteen minutes, when no one talked with him, he used 154 words, 98 of which were different; several ten-word sentences were used during this interval.

R's health has been uninterrupted by any serious ailment. He has not been forced in his development. No special pains have been taken to enlarge his vocabulary, though he has been taught the meaning of words about which he inquired, and has been read to from several children's story-books. His vocabulary has been acquired almost entirely from his parents' conversation. While the "old wives' saw," to which Dewey alludes, "that the presence of other children both hastens and extends a vocabulary" may be true, the fact that *R* has lived as an only child, and has played less with other children than has the average three-year-old child does not appear to have limited his vocabulary. We judge that free opportunity to converse with his parents is as valuable an agency to the child in his linguistic development as free opportunity to converse with other children. The influence of parental example, with the avoidance of excessive 'baby talk' and the use of careful enunciation, is also, we believe, responsible for the exceptionally good pronunciation and relative freedom from errors of syntax that have characterized *R*'s speech. He has had the stimulus to linguistic acquisition that comes from a considerable amount of travel and several changes of residence.

It may be added that *R* was at that time very quiet in the presence of strangers, but loquacious enough in their absence: in two hours of play when no one spoke to him, we recorded the use of 465 different words. He had, at the age of three, received no instruction in reading or writing, in the hope of postponing as long as possible the close use of the eyes.

Method

The present vocabulary was assembled in the following manner. We first prepared 26 blank sheets, one for each letter, and for ten days prior to his third birthday recorded words as fast as we heard them used. We next added those words which we knew had been used previously, but which

had not chanced to appear during this record ; in each instance we framed up conversation that would involve the use by *R* of the word in question in order to make sure that the word was still known and could be properly used. Finally, we turned to the several published vocabularies of children and found a large number of words that had not been recorded by either of the first two methods : these were similarly tested before they were included. We regard it as essential to employ all these methods in order to secure the actual vocabulary. Even after all these devices had been exhausted, we doubtless missed a number of words, as several terms appeared during the next few weeks which were thought to be third-year terms, so that the 1,771 words which are recorded represent a minimal vocabulary, and the actual number of words known and used by *R* prior to his third birthday is probably in the neighborhood of 1,800.

The principles which have governed us in our record demand a brief explanation. The words here listed are those actually used in sentences, but we have not included any isolated terms which were merely pronounced imitatively, or catch-phrases from nursery rimes that were uttered without any appreciation of their meaning. Naturally, not all the words listed were used accurately or even with adequate appreciation of their meaning, *e. g.*, the words *eighty*, *hundred*, and *thousand* were simply known to mean a large number of things. Contrary to the custom of some writers, we have included inflected endings (except plurals), grammatical variants and compounds, *e. g.*, *tall*, *taller*, and *tallest; go*, *going*, and *gone; has* and *has n't; blue*, *bird*, and *blue-bird*. It seems unnecessary to point out that, psychologically speaking, related forms like these are just as much distinct acquisitions for the child as are totally different words such as *tall* and *short:* the principles of exclusion that have been adopted by some compilers of children's vocabularies, notably by Holden, may be grammatically, but they are not psychologically, justifiable.

The Vocabulary

A
a
about
Academic Hall
ache
"a-choo"
across
acting (adj)
acts
actually
afraid
after
afternoon
again
against
ages
ago
ah
ahead
air
album
Alice
alone
all
almost
am
American
an
and
animals
another
answer
any
anybody
anything
anywhere

apart
apple
apricot
apron
are
are n't
arm
around
as
ashes
ask
asleep
at
aunt
automobile
avenue
awake
away
awful
awfully

B

"baa"
baby
back (adv.)
back (v.)
backing
backwards
bacon
bad
bag
baggage
baggage-car
bake
baker
baker-man
ball
balloon
banana
band
bang
banjo
bank
bare
"bare-footie"
barn
bark
barrel
basket
bat
bath
bathe
bathing
bath-gown
bath-tub
batter
be
bean-pot
beans
beater
bear
beautiful
because
bed
beef
beefsteak
been
beets
before
begin
behind
believe
bell
belly
Belden
belong
belt
Bennie
berries
beside
best
bet
better
bib
bicycle
big
bill
Billy
birds
birthday
biscuit
bit
bite (n)
bite (v)
black (a)
black (v)
black-birds
blanket
blaze
bleed
blocks
blood
bloomers
blossom
blossomed
blow
blue
blue-bird
blue-jay
board
boat
bone
bonfire
bonnet
book
bookcase
Boston
both
bother
bottle
bottom
bouquet
bowl
bow-wow
box
boy
bracelets
brake
brake-man
brambles
brass
bread
break
breakfast
bring
brick
broke
broken
broom
broth
brown
brown-bread
bubble
buckle (n)
buckle (v)
bud
buffet
bug
build
building (n)
building (v)
bump (n)
bump (v)
bumpers
bunch
bunny
bureau
burn
burning
burro
burst
Burton
bus
bush
bushel
busy
but
butter
butterfly
button
button-hole
button-hook
buy
buzz

buzzing
by
by-and-by

C

cab
cabbage
cage
call (n)
call (v)
came
camel
can (n)
can (v)
candle
candy
cannon
can't
cap
captain
car
card
card-case
care
careful
carefully
carnation
Caroline
carriage
carpet
carrot
carry
cart
Cashmere Bouquet
cat
catalogue
catch
caterpillar
cathedral
caught
cave
celery
cellar
Centralia
certainly
chafing-dish
chain
chair
chalk
chance
chanced
change (n)
change (v)
chase
chased
"chaser"
check
check-book
cheese
chew
Chicago
chickadees
chicken
chiffonier
children
chimney
chin
chocolate
choke
'choo'
chop (n)
chop (v)
Christmas
Christmas-tree
chunk
church
cigar
cinnamon
circus
cities
clap
claws
clean
cleaning
clear
Clifford
climb
clock
closet
cloth
clothes
clothes-line
clothes-pin
clouds
cloudy
clown
Clyde
coal
coal-bin
coat
cocoa
cocoanut
coffee
coffee-pot
Coffman's
cold (a)
cold (n)
cold-air-box
collar
collision
color
colored
Columbia
columns
comb
come
commode
company
conductor
cook
cook-book
cookies
cooking
cool
coop
'Co-op'
corncob
corner
cornet
corn-flakes
cornstarch
corset-cover
cotton
couch
could
could n't
couple (v)
coupled
coupling
count
course
cover (n)
cover (v)
covered
cow
crackers
cranberries
crawl
crayon
cream
creep
creeping
cross
crows
crumbs
crust
cry
crying
cuff
cuff-buttons
cunning
cunningest
cup
cupful
curly
curtains
curve
curved
cushion
custard
cut

D

Dad

Daddy
dairy
dandelion
dangerous
Danvers
dare
dark
darn
darning-ball
day
daylight
deal
dear (a)
dear (n)
deep
depot
desk
diapers (dipes)
Dick (Dicky)
did
didn't
different
dig
dime
dimple
Dinah
"din-din"
"Dingy"
dining-car
dining-room
dinner
dirt
dirty
dirt-wagon
dish
dish-mop
dish-pan
dismissed
do
doctor
dog
doing
doll
dollar
dolly
done
don't
door
dot
double-quick
double-time-march
dough
doughnut
down
downhill
down-stairs
drawer
drawers
drawing
drawingroom
draw-team
dreadful
dress (n)
dress (v)
dressmaker
drink (n)
drink (v)
drive
driver
driveway
drop (n)
drop (v)
drum
drumstick
drum-major
duck
dump
dump-wagon
dust (n)
dust (v)
dusty
dynamo

E

ear
early
easily
easy
eat
"Ee"
egg
egg-beater
eight
eighty
either
elastic
elbow
electric
elephant
elevator
eleven
Elizabeth
else
embroidery-bag
empty
end
engine
engineer
Engineering Building
enough
envelope
errands
every
everything
exactly
excuse
eye
eye-winkers

F

face
fall
far
fast
fasten
faster
fat
Fatty
faucet
feathers
feed
feel
fell
fence
fern
few
field
fifteen
fig
figures
fill
filled
find
fine
finger
finger-nail
finish (fission)
fire
fireman
fire-place
first
fish
fish-balls
five
fix
fixing
fixed
flag
flames
flat
flat-iron
floor
flour
flower
"Fluffy"
fly (n)
fly (v)
folded
food
fooling
foot
football
for
forehead

forget
forgot
fork
forth
forwards
foundation
fountain
four
Frances
Fredendall
freeze
freezer
freight
fresh
Friday
fried
friend
frightened
fringe
frog
from
front
frost
Frostilla
full
fullest
fun
funny
fur
furry
furnace

G

gaiters
game
garbage
garden
garters
gate
gelatine
gems
George
get
"get-up"
getting
giraffe
girl
give
glad
glass
glasses
globe
gloves
glue
go
goat
going
gold
gone
good
goodbye
goodnight
goop
gong
got
'goweomes'(printing)
Grace
graham
grandma
grandpa
grape
grape-fruit
grass
gravy
"Gray One" (cat)
greasy
great
greedy
green
grind
grinder
ground
groceries
grocery-man
grow
guess
gun
gymnasium

H

ha
hack
had
hair
hair-brush
hair-pin
half
hall
hammer
hand
handful
handkerchief
handle
hang
hanging
happened
happy
hard
hardly
harmonica
Harold
hat
hatchet
Hattie
has
has n't
have
have n't
hay
he
head
headlight
hear
heat
heavy
heel
Helen
hello
help
her
here
hers
herself
hiccoughs
hide
hiding
high
high-chair
highest
hill
him
himself
"hip"!
hippopotamus
hit
hitched
Hitt (St.)
hitting
hoe
hold
hole
hollow
home
honey
honey-jar
hoodlum
hoods
hook
hop
hopping
hoppy-toad
hope
horn
horrid
horse
horseback
"horsie"
hose
hot
hotel
house
how
hug (n)
hug (v)

huge
hundred
hungry
hunt
hurt
hurry
hurrying

I

ice
ice-cream
ice-cream soda
iceman
if
imagine
in
inches
ink
inside
instruments
into
iron (n)
iron (v)
ironing-board
is
is n't
it
its
itself
Ithaca

J

Jack
jacket
Jack Frost
jam
jammed
jar
Jefferson City
jelly
Jingle Primer
Johnson
joke (n)
joke (v)
joker
joker-man
Joplin
Judge
juice
juicy
jump
just

K

Kansas City
"Katy" (R. R.)
keep
"kee-pash"
"ker-chunk"
kettle
key
key-hole
kick
kid
killed
kimona
kind
kiss (n)
kiss (v)
kitchen
kitchen-cabinet
kitten
kitty
kitty-cat
knee
knee-caps
knife
knock
knocking
knot
know
knuckle

L

laboratory
lace (n)
lace (v)
laid
lady
lake
lamb
lamp
lamp-post
lap (n)
lap (v)
lard
last
later
laugh
laundry
laundry-man
lawn
lawn-mower
Lawrence
Lawson
lay
lazy
leaf
learn
leave
leaves
left (a)
left (v)
leg
leggings
lemon
lemonade
lend
lessons
let
lets
letter
letter-man
lettuce
library
lie
lift
light (n)
light (a) (color)
light (v)
like (a)
like (v)
Lilly
lion
lip
listen
listening
little (ikkle)
load (n)
loaf (n)
lobster
lock
locket
lonesome
look
looking
looser
long
longer
lose
lot
loud
louder
Louise
love
lovely
loving
low
lower
lump
lunch

M

machine
made
magazine
mail
make
ma'am
mamma
man
mandolin
many
Maple-flake

marble
march
Margaret
Marguerite
Marion
mark (n)
mark (v)
marmalade
Mary
mash
Massachusetts
mat
match (n)
match (v)
match-box
matter
may
maybe
mayonnaise
McBaine
me
mean
"meanded"
meant
measure
meat
meat-man
meat-chopper
medicine
meet
meeting (n)
men
mend
miaou
mice
middle
might
might n't
milk
milk-bottle
milk-cart
milk-jar
milkman
mind
mints
minute
mirror
mischief
mischievous
Miss
miss
missis
mistake
mister
mittens
mix
mixed
molasses
Monday
money
monkey
"monkey-shines"
moo
moon
more
morning
"morowsky"
mosquito
most
mother
motorman
mouse
mouse-trap
mouth
mouthful
move
mow
much
mud
muddy
mudpuddle
mule
'Mum'
music
music-box
music-cabinet
must
my

N

nail (n)
nail (v)
"Nannie"
nap
napkin
napkin-ring
naturally
naughty
navel
near
nearer
nearly
neck
necktie
need
needle
nest
never
new
newspaper
New York
next
nibble
nice
nicer
nickle
"Nig"
night
nightdress
nightgown
nine
ninety
no
not
nose
noise
noisy
noon
number
nursery
nut

O

oatmeal
ocean
o'clock
of
off
office
oh
oil
oil-can
old
on
once
one
only
open (a)
open (v)
orange (fruit)
orange (color)
orange-wood
organ
other
others
"ouch"
ought
ought n't
our
out
outdoors
outside
oven
over
overalls
"ow"
own
oyster

P

pack
package
packing
page

pail
paint
pan
pantry
paper
paprica
part
parrot
"pash"
passed
passenger
passenger-car
past
pat
path
Patsy
patter
paws
pay
peachy
peanut
peas
peek-a-boo
peg
peg-board
pen
pencil
penny
people
pepper
peppermint
perceive
perhaps
pet
petticoat
piano
pick (mick)
pickle
picture
pie
pie-board
pie-crust
piece
pig
pig-back
pile
pillow
pin
pincers
pinch
pin-cushion
pine-apple
pipe
pitcher
place
plague
plaguing
plain
plainly
plant (n)
plant (v)
plate
platform
play (a)
play (v)
playful
pleasant
please
ploughing
pocket
pocket-book
pointed
poke
poker
pole
polite
Polly
pollywog
pond
poor
porch
pork
post
postcard
post-office
potato
potato-masher
pound (n)
pound (v)
pour
pouring
powder
presents
prettier
pretty
prick
prickers
prickles
probably
prunes
pudding
puddle
puff
pull
pump
"pump-bird"
pumpkin
punch
purple
purr
purring
push
pusher
Pussina
pussy-cat
put

Q

quack
queer
quick
quicker
quickly
quite

R

rabbit
racket (tennis)
racket (noise)
radish
rag
rail
railroad
rain
raindrops
raining
rainy
raisins
rake
raspberry
rather
reach
read
read
ready
real
really
reason
red
redbreast
refrigerator
register
remember
rest
resting
ribbon
Richard
ride
right
ring (n)
ring (v)
rinse
ripe
river
roast
robin
rock (n)
rock (v)
rocking-chair
rogue
roll
roller
rolling-pin
romper
roof

room
rope
rose
rough
round
row
rub
rubber
rubbers
rug
run
run down
runner
running

S

safety-pin
said
Saint Louis
Saint Nick
Salem
salt
salt-shaker
same
sand
sandwich
Santa Claus
Saturday
sauce
saucer
saw
say
scallops
scamp
scare
school
schoolhouse
scheme
scissors
scoot
scrambled eggs
scratch
screen
screw (n)
screw (v)
screw-driver
scrub
search
seat
second (a)
see
seed
seem
sell
send
sergeant
set
seven
sew
shades
shadow
shady
shall
shaggy
shake
shampoo (n)
shampoo (v)
sharp
sharpen
shave
she
sheep
sheet
shell
shelves
shield
shine
shining
"shinny-up"
shiny
shirt
shoe
short
should
should n't
shovel
show
shut
shutters
sick
side
sidewalk
sift
sight
silk
silly
silver
since
sing
single
sink
sir
sisters
sit
six
skate
skates
skin
skirt
sky
slammed
sled
sleep
sleeper-car
sleepy
sleeve
slice
slide
slip
slipper
slippery
slow
slowly
smack
smart
smash
smash-up
smell
smoke
smoked halibut
smoke-stack
smooth (a)
smooth (v)
smoothing
snap
sneeze
"snootikins"
snow
snow-ball
snow-flakes
snowy
so
soak
soap
soap-dish
socks
soft
softly
soldier
some
somebody
somehow
something
sometime
somewhere
song
soon
soot
sore
sorry
sound (n)
sound (v)
sounding
soup
sour
spank
sparrow
spatter
speak
speck
speckled
spider
spill
spin

spinning
spinning-wheel
splash
splinter
spool
spoon
spoonful
spot
spotted
spout
spread
spring
square
squeak
squeal
squeeze
squeezer
squirrel
stairs
stamps
stand
standing
star
start
starting
state
State-house
station
stay
steam
steamboat
steam-box
steam-roller
steeple
stem
step (n)
step (v)
steps
stick
sticky
still
stocking
stocking-cap
stomach
stone
stop
stopped
stopper
store
storm
stormy
stove
straddle
straight
strainer
strap
strawberries
street
stretch
string
stripes
strong
stubby
stuck
students
study (n)
study (v)
stuffing
stunt
such
sugar
sugar-bowl
suit
suitcase
summer
sun
Sunday
sunshine
sunshiny
"sunnyshine"
supper
suppose
suppository
sure
surely
surprise (n)
surprise (v)
swallow (v)
sweater
sweep
sweet
swim
swing (n)
swing (v)
swinging
switch

T

tabby
table
tablecloth
tail
take
taken
taking
talk
talking
tall
taller
tallest
tam
tan
tape-needle
tapioca
tassel
taste (n)
taste (v)
taught
tea
tea-ball
teach
tea-kettle
tea-pot
teaspoon
tea-table
team
tear (v)
Teddy-bear
"teetery"
teeth
telegraph pole
telephone (n)
telephone (v)
tell
ten
tender (a)
tender (n)
tennis
terribly
than
thank
that
the
their
them
then
there
thermometer
these
they
thick
thimble
thing
think
thinking
thirsty
thirteen
this
those
though
thought
thousand
thread
three
throat
through
throw
throwing
thumb
Thursday
ticking
"tick-tick"
ticket
tickle

tie
tiger
tight
time
tin
tin-foil
tiny
tip
tippy
tire (n)
tired
tissue-paper
to
toast (n)
toast (v)
toasted
tobacco
tobacco-jar
toboggan
to-day
toe
toe-nail
together
tomato
Tom-cat
Tommy
to-morrow
tongs
tongue
to-night
too
tool
tool-house
"toot-toot"
tooth
tooth-brush
tooth-paste
tooth-pick
top
touch
towards
towel
town
toy
track
train
tray
tree
trick
trill
trolley-car
trousers
truly
trumpet
trunk
trunk-wagon
try
trying
tub
Tuesday
tumble (v)
tumbler
tunnel
turkey
turn
turned
turning
turtle
twelve
two
typewriter
"typewritering"

U

umbrella
unbutton
uncle
under
underdrawers
underneath
undress
union-suit
university
unlock
up
uphill
upstairs
"up-ti-diddy"
upper
us
usually
use

V

vaccination
vanilla
vanilla-creams
vase
vaseline
vessel
vest
very
vinegar
violet
Virginia

W

Wabash
wagon
waist
wait
wake
waked-up
walk (n)
walk (v)
"walk-way"
wall
want
warm
was
was n't
wash (n)
wash (v)
wash-cloth
washing
wash-woman
watch (n)
watch (v)
water
water-cart
watermelon
waved
wax
way
we
wear
Wednesday
weeds
welcome
well
went
wet
what
wheat
wheel (n)
wheel (v)
wheel-barrow
Wheeler's store
when
where
which
Whipple
whip (n)
whiskers
whisper
whistle
white
who
whoa
whole
why
"Why-senses!"
wide
will
wind (n)
wind (v)
window
window-seat
window-sill
wings
winter
wipe
wire
wish

witch
with
woman
Woman's Exchange
wonder
wondering
won't
wood
wood-pecker
woods
woolly
word
work (n)
work (v)
work-basket
worm
worm-hole
worn
worst
would
would n't
wreck
wrist
write
wrong

Y

yard
yardstick
yawn
yes
"yessir"
"yessum"
yesterday
yellow
yet
you
your
yourself

Comments on the Vocabulary

(*1*) *The significance in general of a child's vocabulary.* It is hardly necessary to call attention to the fact that the child uses relatively few terms with adequate appreciation of their meaning. Various collections of children's definitions have shown, for instance, that the word represents for the child a reaction to a situation, or perhaps better expressed, the word is a symbol of a certain situation with which it has become associated in the course of his experience. Thus, *wall paper* meant for Chamberlain's child, *something-not-to-be-scratched.*

Now this primitive kind of verbal meaning really extends into adult usage in many cases, though it is then so much less baldly evident that its presence has been, we believe, often unappreciated by those who discuss the psychology of linguistic development. A word, in short, may be used in an *explicative* manner or in a purely *indicative* manner. To make this point clearer: the expert employs his technical terms descriptively, with full appreciation of their exact meaning, and if necessary makes this meaning clear by specific exposition, or at least the technical terms that he uses have been previously explicated by him, even when he uses them indicatively in the course of his conversation or writing; the man-on-the-street, however, or as for that matter the expert himself when on unfamiliar or non-technical ground, uses words merely to indicate situations.[1]

Since the explicative use of a given word represents a far greater intellectual attainment than the merely indicative use of the same word, it would be desirable, if it were possible, to measure the child's intellectual progress in terms of the number of words that he can use explicatively rather than in terms of the number of words that he employs in indicative expression.

[1]We have here a distinction that might perhaps be put into the phraseology of James as a distinction between 'acquaintance with' and 'knowledge about.' The distinction appears very prettily in a com-

Again, given a strong tendency to linguistic imitation and expression and the presence of parents or others who are ready to name situations for him as fast as they appear, there is no reason why a child should not make rapid progress in the acquisition of a vocabulary, *i. e., of a child's vocabulary.*

In the light of this discussion, it is evident that the classification of the child's vocabulary, as attempted in a later section, must always be somewhat artificial. We might say, for example, that when *R* uses the phrase *Academic Hall*, he is really using not a noun, but a pronominal adverb, because *Academic Hall* is for him merely the index of a place where he goes with his father.

(*2*) *Size.* There are but few lists of words used by three-year-old children that can be directly compared with the above, particularly because the methods of recording such lists are so different as to render comparison difficult. Reference to Table 1, however, will indicate that the present list is apparently much longer than the average for the age. Some larger vocabularies have been mentioned, but have not been printed in detail.[1]

Although the estimations of the older writers have been repeatedly shown to be absurdly low, we cannot forbear to quote again the statement of Laurie (based on no less an authority than Max Müller) in his *Lectures on language and linguistic method*, who says: "In the child up to the eighth year the range of language is very small; he probably confines himself to not more than 150 words." Incidentally, it may be pointed out that this ignorance of the range of children's vocabularies is shared at the present day by many adults who have not been thrown in contact with young children. In the course of a recent dinner-table conversation, we asked one of the men who was present how many words he supposed a three-year-old child could employ: his 'guess' of 150 was greeted with a laugh of good-natured ridicule by his bachelor neighbor who declared: "Oh, pshaw; fifty words would cover the vocabulary of the brightest three-year-old you ever knew."

(*3*) *Conditioning factors.* It is doubtless true, as several writers have asserted, that ease of pronunciation is a determining factor in the acquisition of a vocabulary, but it is also true, as has been shown by Humphreys (10) and the Gales (6), that, after the second year, serviceability is a more important factor than ease of pronunciation. The child employs those

parison of the introspection of the trained laboratory expert with the account that the novice gives of his experience when placed under the same conditions. Professor Titchener has called our attention to the bearing which the distinction has upon the interpretation of children's vocabularies.

[1] Lukens, for instance (*Amer. J. Psych.*, x, 1898, 163), reports without comment the assertion of Dr. Elmer Gates to the effect that his boy at 21 months knew 11,000 words. We should ask for a salt-cellar to assist in the assimilation of this statement!

terms that relate to things in which he is interested, even though they be long and for him difficult to pronounce. Otherwise we should not expect a three-year-old child to employ such words as *university*, *laboratory*, *baggage-car*, *Christmas-tree*, *Cashmere Bouquet*, etc. To make this function of interest more evident, it occurred to us to select some evident interest and see how many words could be traced to its operation: as "the mouth is the centre of psychic interest" during this period, we selected the food-instinct for this purpose. If we list from *R*'s vocabulary all terms that have been clearly acquired in connection with eating, *i. e.*, not only names of foods, such as *apple*, *apricot*, *scrambled eggs*, etc., but also the names of feelings, activities, or articles connected with the preparation and the assimilation of foods, such as *baker*, *napkin-ring*, *sour*, *nibble*, *mouthful*, etc., we find a total of 215 words. Thus, over 12 per cent., or one word in eight, of *R*'s vocabulary has been acquired in some fairly direct relation to the feeding instinct. This proportion is, of course, entirely too small, because an indefinite number of common terms which are not specifically food terms, *e. g.*, *want*, *all*, *mine*, *fix*, etc., must have been first used in conjunction with feeding.

(*3*) *The distribution by parts of speech.* It has been customary in the publication of children's vocabularies to examine the relative frequency of the several parts of speech, and to infer from this distribution certain pedagogical principles concerning the preponderance of activity in the child's make-up. In the case of children of two years and under, such a frequency-table is of questionable significance, because, as has been shown by Dewey (3), O'Shea (20) and others, the child in many ways does psychological violence to the technical classifications of grammar. At the age of three, however, the sentence form, at least in *R*'s conversation, is well developed, and the classification into parts of speech may be regarded, in our opinion, as more nearly representative of the real psychological 'feel' of the words in his speech, though subject to the qualifications mentioned in our previous discussion. In Table 1 we have introduced the results of a grammatical classification of his vocabulary, together with the results of several other investigators. In computing the distribution of *R*'s vocabulary we have counted numbers, such as *one*, *two*, etc., as adjectives; we have counted all past participles, such as *gone*, *filled*, etc., as verbs, and we have included all inflected endings, compounds, etc., as found in the vocabulary.

Explanatory: Tracy's 5,400 words represent the summary of 18 (?) children's vocabularies for the ages 12 to 30 months. For detailed distribution for each child, consult the original article: the data indicate wide variations, *e. g.*, of the children in his lists one has 15%

TABLE I

Classification into parts of speech

Authority	Reference	Age of Child	Total No. of words	Percentage of Different Parts of Speech								
				Nouns	Verbs	Adjec.	Adv.	Pron.	Prep.		Intrj.	Con.
Jegi	11	16 m.	75	69.0	16.0	4.0	5.0				5.0	0.3
Hall	8	17 m.	232	67.2	16.0	8.0	2.2	1.3	2.2		2.1	0.4
Jegi (Cary)	11	18 m.	60	60.0	27.0	5.0	5.0				3.0	
Dewey	3	18 m.	144	53.0	28.0	1.0	6.0	6.0			5.0	1.0
Dewey	3	19 m.	115	60.0	21.0	11.0	3.0	0.0	0.0		5.0	0.0
Tracy	25	12-30 m.	5400	60.0	20.0	9.0	5.0	2.0	2.0		1.7	0.3
Jegi	11	2 y.	1227	59.2	19.4	11.4	4.4	1.7	2.0		1.6	0.3
Moore	19	2 y.	475	62.3	19.3	8.0	2.9	2.3	Remainder 2.9			
Humphreys	10	2 y.	1121	52.8	25.2	10.1	5.0	3.1	2.5		0.8	0.5
Gale	5	2 y.	614	53.2	22.7	11.2	6.2	2.7	1.8		1.8	0.2
Gale	5	2 y.	115	60.0	14.8	14.8	6.9	0.0	1.7		0.9	0.9
Gale	5	2 y.	578	50.7	22.3	11.9	6.6	4.6	2.2		0.3	1.1
Holden	9	2 y.	483	59.0	22.1	7.0	6.0	Remainder 6.0				
Holden	9	2 y.	399	57.6	22.6	9.2	4.5	Remainder 6.2				
Holden	9	2 y.	173	65.3	17.3	7.5	3.5	Remainder 6.4				
Salisbury	22	32 m.	642	54.5	23.3	9.3	5.0	3.7	2.6		0.8	0.6
Gale	5	3 y.	1176	57.4	20.2	11.9	4.5	2.8	1.4		0.8	0.7
Whipple	—	3 y.	1771	56.1	22.1	11.7	5.0	1.8	1.3		1.3	0.5
Mateer	18	4 y.	1020	55.0	22.0	14.0	4.0	2.0	1.5		1.2	0.3
Kirkpatrick	12	Dictnry	——	60.0	11.0	22.0	5.5	Remainder 1.5				
Kirkpatrick	12	Robsn Cr.	3100	45.0	24.0	17.	7.0	Remainder 7.0				
Kirkpatrick	12	Robsn Cr.	215	24.0	?	?	10.0	10.0	5.0			6.0

interjections, another none, while percentages of adjectives range from 2 to 13.

In the case of Gale's child whose vocabulary is reported as 614, the distribution is calculated for 436 words only, on account of the loss of some records.

Holden's figures are not really comparable with the others in this Table as he listed merely the words actually *used* during the 24th month only: again his percentage of nouns includes the pronouns, while prepositions, interjections and conjunctions are combined.

The absolute distribution for *R* is as follows: nouns (including proper nouns) 993; verbs, 391; adjectives, 209; adverbs, 89; pronouns, 33; prepositions, 24; interjections, 24; conjunctions and articles, 8.

In the examination of this Table the particular points of interest are the relative number of nouns and verbs, the percentage of adjectives and adverbs, and the use of interjections. With regard to the last-named feature, it is evident that, since there are but relatively few interjections to be acquired, the method of distribution by percentages is somewhat misleading: thus, *R* at three uses 24 interjections: if he had used four of these when his vocabulary contained but 100 words, he would be credited with 4 per cent. of prepositions, whereas the actual

use of 24 interjections in his present large vocabulary yields but 1.3 per cent. frequency. Somewhat similarly, the acquisition of a few pronouns suffices to produce a somewhat misleading proportion in the earlier months, *e. g.*, the difference between one of Dewey's children at 18 months with 6 per cent. pronouns, and another at 19 months with no pronouns.

Special significance has been laid by most writers upon the fact that whereas the dictionary, according to Kirkpatrick's estimate, contains only 11 per cent. of verbs, the average child has about twice this amount in his vocabulary,—a fact which is interpreted as indicative of the tendency of the child to lead a life in which the preponderant interest is in activities rather than in things. Some light is thrown upon this matter by Kirkpatrick's examination of 3,100 *different* words taken at random from the pages of Robinson Crusoe in which he found that the proportion of nouns was but 45 per cent. while that of verbs was 24 per cent.: it is evident, then, that the child hears in the ordinary speech of those about him a greater percentage of verbs than are listed in the dictionary. Again, if the first 215 words of Robinson Crusoe are examined (without excluding duplicates) the proportion of nouns, as shown in the Table, sinks to 24 per cent.

Finally, inspection of the Table will show that the child uses adjectives less than half as frequently as these are found in the dictionary. We judge that this is due in the main to the fact that adjectives are qualificatory terms that imply a certain degree of maturity and the capacity to discriminate the qualities of objects and to abstract these qualities from the things to which they are at first attached. It might be, then, that the total number of adjectives used by a young child would afford a fairly accurate notion of his degree of mental development. Jegi thinks, also, that the adult uses relatively few adjectives in his conversation with children and that the child finds gesture more convenient for expressing these qualities during the earlier months.

(*4*) *Special lists.* As we have just noted, particular interest attaches to the acquisition by the child of qualificatory terms, *e. g.*, those that relate to such categories as color, size, shape, quantity, and to the expression of comparative values. We have, accordingly, prepared the following selected lists to indicate, in so far as a vocabulary can do so, the degree of attainment that *R* displayed in these several directions at three years of age.

(*a*) *Color terms.* *Blue, black, brown, color, colored, dark, gray, green, light, orange, purple, red, shadow, shady, tan, violet, white, yellow.* The color names *white, black, red, green, blue, yellow.*

orange, brown, and tan, were applied correctly and without hesitation.

From an examination of the literature it is evident that this degree of capacity to employ color nomenclature is in advance of the normal three-year capacity. We believe that it is to be attributed primarily to the fact that *R* has been in the habit of playing with kindergarten balls, peg-boards, and other appliances in which the six colors,—*red, green, blue, yellow, orange* and *purple*,—are represented, and that he has been told the names of these colors whenever he made inquiry on the subject, and we believe that the average three-year-old child could be taught to apply these terms correctly.

From the reports of Sanford (23) and Wolfe (27) we gather that the average educated adult is limited to the use of some 25 color terms, that the average two-year child has acquired not more than one of these terms, and that many five-year old children fail to apply more than four or five of them correctly (see Table 2). To be more specific, Sanford reports that one girl of 21 months who used 185 words had no color names, and that another of the same age who used 400 words knew only *white*. Holden (9) reports three cases of children at two years who used 173, 399, and 483 words respectively during their 24th month, but who did not employ any color terms. Preyer's child knew no color-names at 20 months, but, after receiving special color drill from the 85th week, could use *red* and *green* (when only these two colors were presented) at 25 months; and *red, yellow, black, violet,* and *brown* at 34 months, though not at all sure of *green* and *blue* at this period. In five vocabularies collected by Greenwood (reported by Sanford) the following capacities are recorded: 17 months, none; 24 months, *white, black, red, blue;* 30 months, *black, white, red, green, blue, brown, pink;* 3.5 years (and another child at 5 years), *black, white, red, green, blue, yellow.* The results obtained by Wolfe in his schoolroom tests of children who had had no special school instruction are here reproduced for children of five years; those for older children may be found in the original article, p. 12.

TABLE 2

Percentage correct answers in naming colors: 5-year children (Wolfe)

	No.	White	Black	Red	Blue	Yellow	Green	Pink	Orange	Violet
Boys	28	96.4	100.	82.1	67.9	57.1	67.9	20.8	0.0	0.0
Girls	20	95.0	95.	100.0	95.0	75.0	90.0	73.3	5.0	0.0

It is surprising to note that Binet and Simon, in their series of diagnostic tests,[1] regard the capacity correctly to name the *four* colors, —*red, green, blue, yellow*,— when papers of these colors are shown, as a capacity that is normally reached only in the *eighth* year.

This conclusion, however, is partially confirmed by the results of Engelsperger and Ziegler, who found that 30 per cent. of the boys

[1] A. Binet and T. Simon: Le développement de l'intelligence chez les enfants, in *L'Année psychologique*, xiv, 1908, 1-94.

and 28 per cent. of the girls aged 6 to 7 years whom they tested in the schools of Munich could not name these four colors correctly.[1]

(*b*) *Numerical terms. All, eleven, few, fifteen, first, five, four, half, hundred, nine, ninety, one, once, second, seven, single, six, ten, thirteen, thousand, three, twelve, two.* It may be said in explanation that *R* several times performed the feat of counting correctly to thirteen, but that, partly from a well developed sense of humor, partly from carelessness, he oftener invented series of his own. His actually correct application of numbers was at this time confined to the range from one to four; such terms as *eighty, ninetv, thousand*, etc., simply meant a large number and were used in such sentences as "See, mamma, I have a whole lot of blocks on the floor,—a thousand blocks, I guess."

(*c*) *Terms for sizes, shapes, and tactual qualities. Big, inches, huge, little, long, longer, pointed, round, rough, scallops, shaggy, sharp, short, slippery, smooth, soft, square, sticky, straight, tall, taller, tallest, tender, thick, tiny, wide.*

(*d*) *Terms expressing values.* We have selected here those terms which might be used in a quasi-ethical sense, though it is not to be supposed that many of them really had that significance at this time. *Awful, bad, beautiful, best, better, dreadful, good, horrid, lazy, naughty, nice, nicer, pleasant, polite, right, terrible, worst, wrong.*[2] To these adjectives might be added a few verbs like *bother, ought, ought n't, must*, etc., which might take on moral significance.

(*e*) *Invented terms.* There is no word in *R*'s vocabulary that is an out and out invention, but there are several adaptations which he developed early in his career and has used persistently ever since: thus, the term *goweomes* (sometimes *gomeomes*) is applied to all printed letters or writing; this word is of obscure origin and may be a real invention. The word "Ee" was applied for some time to a boy cousin and was a source of mystification until we discovered that it sprang from "he" in referring to the boy. The coining of verbs from nouns and other similar adaptations, such as *typewritering* from *typewriter*, is familiar to all parents.

We have appended a short bibliography of the most available references in English: the list is, of course, not complete, but represents the articles which we have found most helpful in the preparation of *R*'s vocabulary.

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[1] A. Engelsperger and O. Ziegler: Weitere Beiträge zur Kenntnis der physischen und psychischen Natur des sechsjährigen in die Schule eintretenden Kindes, in *Die Experimentelle Pädagogik*, ii, 1906, 49-93. This article should be consulted for a review of the earlier literature and a discussion of methods.

[2] O'Shea points out that these terms that may denote moral qualities in adult speech are used in a very concrete, even physical way, during the third year: complex moral qualities are not appreciated until relatively late in development (20, pp. 61-2).

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(1) E. Barnes, How words get content, in *Studies in Education*, ii, 1902, 43-61.

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(8) Mrs. W. S. Hall, First five hundred days of a child's life, in *Child Study Mo.*, ii, 1896-7, 5th article, 585-608 (Also printed separately. Contains a detailed vocabulary.)

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(10) M. W. Humphreys, A contribution to infantile linguistic, in *Trans. Amer. Philol. Assn.*, xi, 1880, 5-17. (Detailed vocabulary.)

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(12) E. A. Kirkpatrick, Number of words in an ordinary vocabulary, in *Science*, xviii, Aug. 21, 1891, 107-8. (Also discusses distribution of parts of speech in the dictionary, Robinson Crusoe, and ordinary conversation.)

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(17) D. Major, First steps in mental growth: a series of studies in the psychology of infancy, N. Y, 1906, especially ch. xv.

(18) Florence Mateer, The vocabulary of a four-year-old boy, in *Ped. Sem.*, xv, March, 1908, 63-74. (Detailed vocabulary.)

(19) Kathleen Moore, The mental development of a child, *Psych. Rev. Mon. Sup.*, No. 3, 1896, especially part iv. (Detailed vocabulary, pp. 141-3.)

(20) M. V. O'Shea, *Linguistic development and education*, N. Y., 1907, especially ch. iii.

(21) W. Preyer, *Mental development in the child*, N. Y., 1901, ch. viii, also *The mind of the child*, N. Y., 1898, chs. xvii-xviii.

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(23) E. C. Sanford, Notes on studies of the language of children, in *Ped. Sem.*, i, 1891, 257-260.

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(25) F. TRACY, The language of childhood, in *Amer. Jour. Psych.* vi, 1893, 107-138. (Includes a biography of 101 titles.) See also his *The psychology of childhood*, Boston, 1901. ch. v.
(26) G. M. WHIPPLE, Vocabulary and word-building tests, in *Psych. Rev.*, xv, March, 1908, 94-105.
(27) H. K. WOLFE, On the color-vocabulary of children, in *Nebraska University Studies*, i, No. 3, July, 1890, 205-234.

THE TWENTIETH CENTURY CRUSADES, AND WHAT THEY TAUGHT ONE MEMBER OF THE FIVE HUNDRED

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Significance. No more striking illustration of the rapidly changing attitude toward both the method and content of Educational Training can be found, than in the pedagogic-sociologic-economic movement which has recently impelled upwards of one thousand teachers to cross the ocean on organized tours of scholastic investigation. Furthermore, these Twentieth Century Crusades by their characteristic features, not only indicate fairly well the distance travelled in the evolution of civilization since the close of those earlier Crusades of mediæval fame, but, by the same tokens, they point out schematically the tendencies in the Educational Method of the Future. Investigation, not dogma; construction, not destruction; co-operation, not domination; internationality as distinguished from nationality of type; universality of scope; reciprocity of benefits; recognition of the fallibility of tradition; conformity to changing conditions;—all these are characteristics either not thought of at all, or deemed heretical, at this earlier period, but which, nevertheless, are sure to be more and more accentuated in the activities and philosophies of the World's Tomorrow.

It is extremely significant that the champion of this Dynamic Pedagogy,—this Educational Crusade,—is not himself an educator in the ordinary acceptation of the word, but one whose interests lie rather in industrial lines, thus indicating that as Education is no longer the perquisite of theology and the professions, but now extends also to the working classes, so no longer can Instruction afford to ignore the suggestions and needs of the Industries in shaping its future policy. Indeed not a little of the interest attaching to this whole movement is due to the manner of its development from the "Mosely Industrial Commission to the United States" in 1902, and the "Educational Commission" in 1903.

Origin. Mr. Alfred Mosely, of London, writes in his Report of 1903:

"The origin of the Industrial and Educational Commissions to the United States takes me back to South Africa some fifteen years ago. I had for many years been engaged in mining operations at Kimberly,

which, in common with the work of the great bulk of the diamond diggers, had proved unremunerative, when Gardner Williams, the Californian engineer, arrived in South Africa, and took over the management of the DeBeers Company, which the late Cecil Rhodes was just then amalgamating. Gardner Williams in turn imported the late Louis Seymour. . . Under the guidance of these able men and many others, the development of South Africa was started; and in my opinion, her mining centres owe their primary success and subsequent prosperity to their efforts. . . The success of these engineers turned my attention to the United States, and some years ago I paid my first visit there for the purpose of seeing what sort of country it was that was responsible for sending so many level-headed men to the Cape. I spent some months in the country and was astounded at what I saw around me, not so much at the state of development that had been reached at that time as to what I discerned of the future. I felt that a country teeming with such natural resources must, in the hands of capable men thoroughly acquainted with their business, play an important part in the future of the world, and was bound to exercise a far from negligible influence upon the industries of the United Kingdom. So far as I was able to ascertain, the form of Education given in the United States is responsible for much of its success, and I returned home determined if possible, to get together a party of experts to visit the country and test the soundness of my conclusions. . . . Holding these opinions, I organized my two commissions, the work of which is now too well known to require any long description from myself." . . .

The reports of these Commissions were published, read and discussed in England, and from the familiarity which the English teachers seemed to have of their contents, we venture to think they may have had some effect in shaping the more aggressive educational policy which came in with the passage of the Parliamentary Education Act of 1902.

Following up, approximately, the methods and purposes of these two Commissions, and being aided by the most generous co-operation of Mr. J. Bruce Ismay, President of the International Mercantile Marine Company, Liverpool, and by the National Civic Federation on this side the water, Mr. Mosely organized, in 1906, a still larger body of about three hundred English teachers and school officials, to investigate the methods and equipment of the schools of the United States, and, during the year just passed, five hundred American teachers were invited to visit English schools. It was the writer's good fortune to be one of the American Five Hundred.

We say "good fortune," for surely no person travelling under ordinary circumstances could possibly receive such an abandon of helpful service as our hosts lavished upon us, or could possibly gain in so short a time, so much insight into educational and social conditions. Looking back now upon the visit to England, one of the chief sources of pleasure connected with the tour, is the memory that so many persons, representing so many classes and conditions of life, contributed

in such various ways to the pleasure and success of the whole undertaking. On my table now are invitations to twenty-three receptions given during the eight weeks' residence in London, not including many informal receptions given by associations of various kinds, nor many private lunches, dinners, and afternoon teas proffered by individuals. These courtesies were offered not only by persons immediately connected with the schools, but by many outside the pedagogical ranks, for example Mr. Mosely himself, who welcomed the strangers to his delightful suburban home, and our own American Ambassador, Whitelaw Reid. As many of these receptions were held week after week during the whole period of the crusade, as different detachments arrived,—that is from September to January or perhaps even later, it will be seen that the expenditure was very great, not merely of money, but of valuable time and of patience with guests unacquainted with each other and unfamiliar with English customs.

Other persons conducted groups of teachers about the city or arranged excursions beyond the city, usually at reduced rates. Southampton, with a large part of its mediæval wall still standing; Winchester and Salisbury cathedrals, one with its noble external proportions, the other with its beautiful interior; Stonehenge, sacred to the memory of a past mythology; Stoke Poges, the birthplace of Gray's "Elegy;" the ancient "Burnham Beeches" from which one of our party triumphantly brought home a *horsechestnut* as a souvenir; Eton College, where, since 1440, the aristocracy of England has largely received its education; beautiful Windsor Castle, one of the most magnificent of royal residences; stately Hampton Court Palace, Cardinal Wolsey's princely gift to Henry VIII; Oxford University; Edinburg, Paris — all contributed their share to the pleasure and profit of our journey.

London. London, too, had its strong attractions. Westminster Abbey, which no traveller passes by; St. Paul's Cathedral, where Reformation strifes raged furiously, "where heretics were made to recant and witches to confess," where Wycliffe was proclaimed an outcast from the church, Luther condemned, and Tyndale's Testament burned; the City Temple, in which London's "Socialist Preacher," Rev. R. T. Campbell, now dispenses heterodoxy to Churchmen and sympathy and comfort to crowds of worshippers whom formalism does not satisfy; the Tower of London, with its precious treasure of Crown Jewels, and its suggestions of awful tragedy; the Guildhall, so closely associated with the political life of England; "Madam Tussaud's," where much of the world's history is epitomized in wax; Buckingham Palace; the Franco-British Exhibition;— each deserves a chapter which cannot be given here.

Nor could the social and political phases of English life entirely escape attention in a city in which street processions, made up from the rank and file of the "millions of unemployed," bear witness to the terrible stress and strain of modern civilization where the poorer classes are concerned, the submerged tenth, which, like the deep-sea life, never gets a chance to come to the surface for a full, life-giving breath.

So also did the vagaries and disorders of the Suffragettes furnish equally pointed testimony to the fact that the struggle for political liberty is not yet entirely fought out.

For the first of these great problems now claiming the attention of Parliament, the solution seems almost hopeless in a land where class distinctions are firmly drawn and where much of the old guild spirit of monopoly still lives. The second is likely to 'work out its own salvation' in the not far distant future, if the present Governmental policy continues, inasmuch as the only apparent result of imprisoning the leaders of the movement is to add hundreds of enthusiastic adherents to the party. In a nation which, during one and a quarter centuries of its history, has acknowledged the power, ability and right of women to rule over the property, lives and destiny of the whole English people, the spectacle of the government throwing into prison a few helpless women whose greatest crime is that, having experienced the futility of peaceable appeals, they now propose a clamor sufficient to cause 'the ears of the deaf to be unstopped' while they present their claims for equal opportunities with men in ruling over their own individual interests,—such a spectacle presents elements, at least, of inconsistency. The Suffragettes are undoubtedly making headway, however, and some of those who have suffered most by imprisonment, are confidently expecting the franchise by the end of another two years.

These interesting investigations were, to be sure, incidental to the main purpose of the journey, which was to study educational institutions, and yet, perhaps just these experiences furnished, after all, the best part of the educational value of the whole excursion; for, as never before, the breath of life breathes into the dead facts of European History and its dry bones clothe anew with living flesh and pulsing blood as we are looking at the evidences of the old fierce struggle for political equality; bowing again before the ancient altars where heretics recant; listening to the groans of tortured unbelievers; standing within the old walled towns of Feudal Days; seeing once more the emblems of Chivalry; hearing anew the clank of armor and clash of swords of those other crusaders.

What wonder that with such scenes to inspire, each valiant knight should be seized with holy zeal to beat down the

bulwarks of ignorance and pride! Our army soon opened a fire of questions upon the enemies ranks. "Do you mean tons of water or tons of coal?" asked one of the besiegers, of a ship's officer patiently explaining the meaning of the "ship's displacement" of a certain number of tons. "I rather think they'll weigh about the same, mum," was the polite answer.

Another member of the party in a loud and most troubled tone of voice said to a train official standing by her car window, "Now, I want to meet a man; if I take this train shall I meet him?" "I can't say about that, mum," was the still courteous reply, "if you keep going, and he turns up, you'll meet."

In vain to suggest to Don Femina Quixote, who, charging upon the "Famous Burnham Beeches," brought back the sacred relic already alluded to, that 'horse chestnuts do not often grow on beeches!' One withering glance of scorn transfixed the Infidel, while righteous indignation punctuated and emphasized each word of her reply! "*Miss A—!! I-picked-that-up-right-under-the-trees!!!*"

Special Features of English Schools. Most of our conquests, however, were of a more prosaic type, and the remainder of this article will be concerned with educational investigation of the type to which the term is usually restricted. Arriving in London we proceeded to the offices of Mr. Mosely and of Mr. Blair of the education department of the London County Council. Both of these gentlemen, together with Mr. Gautrey, secretary of the London Teachers' Association, his assistant, Mr. Pincombe, and many others, rendered the visiting teachers invaluable service, advising and aiding in every possible way, and putting each one immediately in touch with the work in which that one was individually interested.

Through the kindness of the administrative officials of the School of Economics and of Professor L. T. Hobhouse and Doctor Alfred Haddon of London University, the writer was permitted not only to visit as many university classes as she desired during her brief sojurn in London, but also to enter the classes of the last named gentlemen as a regular student, thus enabling her to get an inside view of an English University. This much prized opportunity necessarily limited the time devoted to the study of the educational system as a whole, making it desirable to focus observation and energies upon the more unfamiliar aspects of school life. Among these special types a word concerning the University itself may not be out of place.

The University of London. The University of London came into existence chiefly in response to the demands of Non-Conformists who had been excluded from the older universities. Previous to 1900 the work of the University was limited to the examination for degrees. "In 1878, the Senate and Convoca-

tion agreed to accept from the Crown a supplementary charter, making every degree, honor and prize awarded by the University accessible to students of both sexes on equal terms. The University of London was thus the first academic body in Great Britain to admit women as candidates for degrees." Furthermore, this equality of sexes in opportunity is apparently actual, not merely a pretense as in some departments of our American colleges, where, though theoretically the sexes are on equal terms, practically most of the opportunities, aside from lectures, are really reserved for men.

There are now twenty-seven schools affiliated with the University. Sixteen others offer certain courses which are regarded as University work. University extension is an important feature, one hundred ninety courses having been held during the past year in sixty different centres in and about London.

Regarding the character of the work done as compared with that offered in America, our observations were too brief to be of much value. We have already intimated that our own short experience as a pupil was of the happiest sort. Nor did we find that stiffness and cold formality which we are accustomed to attribute to English schools. The lectures in most of the classes visited were characterized by an interchange of thought between pupils and teacher, which we are inclined to regard as exclusively an American characteristic. On the other hand we saw none of the students of middle age and advanced years who form so prominent a feature of our own academic bodies, and it seemed as if the students were less thrown upon their own resources in reaching conclusions than in America; that they did less supplementary reading in connection with their various studies; that there was less laboratory work required; that what was required had less of the type of original discovery; and that so far as one might judge by mere numbers of pupils enrolled in various classes, that young men and women in London do not seem to show the same interest, in philosophical subjects, at least, as those of the United States. For example, in three classes in Psychology which I visited, the numbers varied from three in one class to five in the second, and twenty-four in the third. In classes of similar rank and corresponding subject matter which I had attended in Chicago University, the numbers varied from about fourteen to fifty. In ethics we found about twenty in both London and Chicago Universities; in Anthropology six in London, about sixty in Chicago; in Histology of the Nervous System one pupil in London, in Chicago seventy. These numbers may have been more than counterbalanced in other departments; however, I find the number of students on the University roll given as

5,613, and the whole number of teachers as 826, giving an average of six or seven pupils to a teacher. After sitting for two hours in succession in King College, on the most uncomfortable benches it was ever our misfortune to find in a schoolroom, this disproportion between the two Universities was not surprising.

The number of teachers in the different Faculties makes a very good index of the relative strength of different departments of the University. According to statistics furnished at the Franco-British Exhibition, medicine has the largest faculty, numbering 397. The others stand as follows: Science, 153; Arts, 115; Engineering, 48; Economics, 34; Theology, 26; Law, 16; Music, 14. The classes mentioned in the preceding paragraph are included in Science and in the School of Economics.

One interesting phase of the work of the University of London is the Department of "Eugenics" with its laboratory for research endowed by Mr. Francis Galton. Eugenics is defined as "the study of agencies under social control that may improve or impair the racial qualities of future generations, either physically or mentally." The object of the study is thus stated by Mr. Galton:

"The fact that the laws of heredity apply to man equally with the lower animals and plants, and that the mental functions are subject to the same laws of heredity as the physical ones, has yet to be taken to heart by the public. The salutary effects of natural selection in preventing the degeneracy of the race are so largely interfered with, and sometimes even inverted, by civilization, that another form of prevention is peremptorily demanded." "The power of public opinion being enormously great, we may rest assured that after the importance of Eugenics shall have become generally recognized, many social influences will be brought to bear, and numerous customs will establish themselves that shall further Eugenic conduct with a gentle yet almost irresistible force."

Another interesting phase of research work being carried on by the University of London is the study of Tropical Diseases, especially in the Colonial Possessions of the British Empire. In the University's exhibit at the Franco-British Exhibition, was a small but interesting collection of primitive surgical instruments, such as shell and bamboo lancets, snares for extracting ingrowing lashes, medicine cups of cocoanut shells, poisoned arrows, etc, Pictures of persons afflicted with elephantiasis, sleeping sickness, bite of tzetze fly, and other peculiar forms of sickness were exhibited, also a picture of a health officer of 720 A. D. wearing a mask representing a bird's head as a protection against the Plague.

Medical Inspection of Schools. After the University, perhaps the schools for delicate children and those physically and mentally defective were most interesting and suggestive.

The English people are certainly in advance of us in the matter of keeping a systematic lookout upon the physical condition of children entering school. "In 1906 and 1907 respectively, legislative power was given to local authorities for the feeding of necessitous school children in England and Wales, while medical inspection of all children attending elementary schools was made compulsory." A child who is physically crippled or is mentally unable to keep up with his classmates is sent to a "Cripple School" where seats and desks and work are especially adapted to their individual needs and where school work also can be varied as occasion demands. Basketry, embroidery, and other fancy work, and hand work of various kinds make up a large part of the curricula of these schools. Art work has a large place. The excellent results obtained in the Montpelier House school for the physically deficient, or P. D.'s, would have been creditable for normal pupils. Incidentally, many a little lesson of politeness and thoughtfulness is learned in the practical way of helping some weaker child to get his crutches, or perhaps his seat at the table. All are fed at the school. Each child pays a penny (two cents) a day and this sum is sufficient to cover the actual cost of the food. 2,250 "P. D." children are now attending 28 of these special schools in London. Three or four of the schools are in hospitals, where the children receive care outside of school hours as well as during study time. Many of the children occupy their invalid chairs while working or studying.

"*M. D. Schools.*" About 7,000 mentally deficient children, in London, in 84 special schools, are similarly segregated, not including children whose mental deficiency is so great that they are not capable of benefiting by instruction. Midday meals are provided for them by voluntary contributions. Every child under these two classes and the next to be mentioned is under continuous medical inspection. Where the need is greatest, a nurse is added to the teaching staff. A record is kept of each child, a history of the parents and a record of the improvement or lack of improvement.

These medical examinations go on every school day in the week except Thursday. The mother or some near relative is required to come with the child. On the day of our attendance twenty-one children appeared before the physician. In nearly every case there was a record of delicate health. One child had enlarged tonsils, one weak lungs and glandular enlargement, one a paralyzed hand. One had "'ad a lot of falls on 'is 'ead;" two had Bright's disease; one was somewhat deformed; two were hydrocephalic; two children presented indications of eye trouble; five had fits; one much emaciated little fellow exhibited a bad case of hemophilia; two girls had faint-

ing fits. Most of the children were under size, one or two over grown. Several had already been under hospital treatment.

The mothers were quite as interesting a study as the children, giving us, as they did, many a little glimpse of home conditions of the poorer classes of London. One mother spoke bitterly of the hardship of having to send her sickly epileptic daughter to school when her ailments were incurable, and she was likely to have fits at any time and complained that she could not fully explain the child's absence from school to the teacher since she "was n't allowed to speak up to the dominie"; but most of the mothers came with a silent reserve and apathetic patience which spoke volumes concerning the "struggle for life". One mother could neither read nor write; one could read a very little but said her husband was "very dull." One mother was a paralytic and a daughter came in her stead. Another mother had eleven children living and three were dead. When asked the age of the one with her, some rather detailed mathematical computations were apparently executed before she was able to answer "Seven." One mother reported ten children, another "Seven, the oldest not yet fourteen." Her husband had been out of work for six months. When asked, "How do you live if your husband is out of work?" the answer was, "I earns a shilling a day when I can, mum." Still another came to answer for her little dwarfed, pale-faced, squint-eyed, eight-year-old boy who " 'ad 'ad Bright's disease and dropsy and could not keep up with his classes." In her arms was a frail bit of a baby girl with white, pinched, expressionless face the blue veins straggling over temples and mouth. The mother spoke no word of complaint but when questioned about the food the children were getting said, "No, we don't 'ave milk. My 'usband can't get work. Of course we can't 'ave the proper food for the childern."

One fact which the examination brought out was that of the whole number examined, sixteen were boys, only five girls. We were told that this disproportion was usual, nothwithstanding the fact that more girls are born than boys. [Referring for comparison to the last report of the superintendent of New York City Schools we find that in every table of statistics given relating to defective children the number of boys is more than twice as great as the number of girls.]

In disposing of the backward children, a few were told to continue in their classes for the present—a few were taken out of school; some were transferred to classes for mentally defective; and some were sent to the hospital for treatment. Two or three were put on the list of "necessitous children" and the mother of the squint-eyed boy and sickly baby was told that she should be given milk for the children.

No wonder that these twenty-one children, who were only a haphazard sample of the procession continually pouring into the superintendent's office, were 'behind their work in school'! And how much better it would be in our own schools, if instead of scolding and punishing those who do not get along well, or simply putting them back, we should make a similar careful and methodical investigation of the reasons *why* they are failing and a similar methodical attempt to better the conditions. When we have ferreted out the causes of such mental disability we shall also have discovered the means of preventing the "physical deterioration of the race." Nowhere is there such an opportunity to get at the facts as through the medium of the public school, or rather, this would be the case, were our compulsory attendance laws enforced.[1]

Appropos of the subject of physical degeneration, we may here refer to a study of Miss Alice Ravenhill as presented in a meeting of the Child Study Association, London, concerning the sleep hours of school children, and the conditions obtaining meanwhile. She found that English children of ten years old are getting about one hour less sleep per day than they should have, and that the curve of sleep dropped still lower as the errand boy age was reached. Some children only six years old rose at five o'clock in the morning to assist in work of various kinds. "At six years old 2%, at 9 years 13%, at 12 years 53%, at 13 years 51% are wage earners." . . "Two little boys of five are sent on village milk rounds daily at 5.30 and 6 A. M. respectively . . . a boy of ten rises three days in the week at 3 A. M. for market, while one of eight and two of nine get up at 4 A. M. for the same purpose." . . . "One child is a member of a family of eight living in one room . . ." "The worst case of overcrowding recorded is that of a lad of thirteen, the youngest of the nine, to whom this one room represents home."

Another speaker of the evening considered the effect of loss of sleep upon physical development, and claimed that at six or seven years there is a difference of two inches in height between those getting curtailed hours of sleep and those getting a sufficient amount; furthermore that this difference increases with years.

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[1]In France, "every fall just before the opening of the school year, the mayor of the commune sends to the principals of all public and private schools a list of all the pupils that ought to be at the various schools. In accordance with this information the principals send to the mayor of the commune and to the school inspector a list of all absences for the month with the causes thereof. The mayor, as president of the local school commission is then responsible for instituting proceedings against the parents of children that are not at school." Preliminary Report of N. E. A., 1908, p. 33.

We may say to ourselves these conditions do not obtain among us, but we do not know whether they do or not until an investigation has been made. It is said that in Chicago a child of foreign parentage was sent home with the request that she be given a bath. An angry reply came back from the mother to the effect that 'she had sewed that child's clothes on to stay and she did n't want them ripped off!'

From the Ninth Annual Report of the City Superintendent of Schools of New York, 1907, we quote the following from that portion which deals with "Defective Children:"

"An undersized, nervous, elf-like girl of nine years, she could keep awake and alert except when required to sit at her desk. The moment she was still, her head was down and school forgotten; sleep would overpower her. Here was, indeed, a strange condition—a child apparently well, sleeping early in the school day. A word or two brought out the fact that this child, a mere baby, was required to rise at five o'clock in the morning, to sew buttons on boys' trousers until school time; after school in the afternoon she was again compelled to take up the burden and work far into the night. This child knew that two different sizes of buttons were used, knew where to place them; she knew that ten buttons were put on one pair of trousers, and twenty on two, but beyond that she could not go. . . The child had ability but it was used up each day before the school received her. The fact of sleeping, in this particular case, was due to fatigue. Nature was doing her work; school had to wait. . . It was found upon investigation that the father was saving his earnings; while his wife and this child were providing food and shelter for him and one younger child."

Such conditions as this in our own land are suggestive, at least, of all other hygienic and social evils. Only a few days ago we saw four little boys, apparently about eleven years old, selling newspapers at five o'clock in the cold, wet winter morning. Would it be surprising if these tired children should be reported before night by their teachers as giving trouble in 'discipline', or at the end of the year as "not up with classes"?

Open Air Schools. The third class of schools for backward children is the Open Air School. These are designed, not for the physically disabled, nor for the mentally incompetent, but for those children whose delicate health makes it unwise or impossible for them to be urged forward at the same rate and under the same conditions as strong and healthy children. They are in most cases suffering from anæmia, incipient consumption, enlarged glands or other serious ailments.

Germany, which for the past fifteen years has carried out a very thorough system of medical inspection for the school children of the Empire, was first to make this new departure, in educational method, or rather this return to the original type. London followed the example of Germany, beginning, last year, with one open-air school as an experiment, increasing the number this year to three. In Germany the schools are

kept open until Christmas; in London they closed about the first of November. The object is to cure as well as to teach. In the Montpelier House School, Kentish Town, N., we found a group of children working under almost ideal conditions from the hygienic standpoint. A long shed, open on the whole of one side and 'not too close' on the other three was the school-room. Here the children worked in rainy weather, and at other times when the work was such as to necessitate tables. Otherwise the class sessions were held out of doors in the open or under the trees. The little camp chairs which served as beds later in the day did service now for "recitation benches," and had the advantage of being easily moved from place to place or disposed in groups as occasion demanded. The school hours are from 9 A. M. until 7 P. M., which seems a long day for "invalid children" unless we keep in mind that three meals are served during that time (in Germany four), and that after the noon meal every child must "sleep" for two hours. Naturally some pairs of wide-awake eyes refuse to shut just because the clock declares that now is the proper time; but at any rate each individual must keep quiet in his own particular corner and let the others sleep. If the weather is fair and the ground not too damp, thick blankets like "steamer rugs" are laid four folds thick upon the ground and here the children take their after-dinner nap. If the ground is water-soaked or the weather too damp, the camp chairs serve for couches and the rugs are wrapped about the children. In the afternoon emphasis is placed upon gardening and other manual work. After the evening meal the children return to their homes. According to the report of the London County Council, a head mistress, three assistants, a nurse, cook, cook's assistant and a "school-keeper" are allowed to each school of 70 pupils. The school physician also keeps a strict watch and careful records of the physical condition of each individual child from week to week.

With respect to the effect upon the children of this out-door life we may best quote from the report of Dr. Frederick Rose, of Eng., who placed on exhibition in the Educational Department of the Franco-British Exhibition a model of a set of buildings designed for an ideal Open-air School. His remarks apply especially to the German experiment, but judging from the statements of the teachers, they are equally true of the London schools. Dr. Rose says:

"The work of the school doctor consists in keeping a careful watch on the bodily condition of the children. He weighs them, constantly examines the heart and lungs, the state of the blood, and general condition with regard to color, muscular and flesh development. Plenty of mineral, slipper, and sun baths are given.

The first physical results after the first experiment, which was carried out four years ago with a hundred children for three months,

were very remarkable. Twenty-three per cent. were cured, forty-five greatly improved. The second experiment, which lasted five months, gave still higher percentages of cures and improvements. Nearly half of the anæmic cases were cured and about a third of the scrofulous cases. More than half of the consumptive cases showed great improvement, and cases of heart trouble were appreciably diminished. The increase in weight per child was about six or seven pounds, or roughly about half a pound per week, per child. Many children increased by eight pounds, and eleven children showed an increase of from eleven to eighteen pounds. The children's bodies also became hardened, to some extent, by their constant sojourn in the open air, so that even during wet and cold weather they scarcely ever suffered from colds and similar indispositions." . . . "The educational results were no less remarkable. All the teachers noticed the increase of mental attention and alertness. Three months after the children returned to the ordinary town schools, reports were sent in from the head masters showing that in all cases they were able to resume and continue their work in a normal manner. In a few cases their progress was even more satisfactory than before their attendance at the open-air school. These educational results were brought about by small classes of twenty-five children to one teacher, by a reduction of the hours of formal instruction, and generally by bringing the instruction into touch with out-door conditions, and thus stimulating the children's interest. These are very significant results, and raise the question as to whether the instruction in elementary schools could not be imparted in a different manner with greater benefit to the children's health and a better utilization of the large sums expended on elementary children. If such results can be obtained with debilitated children taken out into the open, their hours of instruction reduced, the number of teachers increased, and their health looked after, what results could we not hope to attain with normal children under similar conditions?"

"The behavior, too, of the children showed great improvement, especially with regard to order, cleanliness, self-help, punctuality, good temper and kindly disposition. This was attributed to their isolation from street life, to the constant intercourse with the teachers outside the formal hours of instruction, and to their sharing in the daily tasks required of a community."

Mr. Rose suggests further that open-air schools can be built at a reduction of at least one-third of the expenditure required in constructing an ordinary schoolhouse, also that portable buildings might be so constructed that they can be taken apart and thus transferred from place to place as is already done in other cities. "The great success of the portable Doecker school buildings on the Continent and in some parts of England has shown that this can be done, even for a school of six hundred children, as often as necessary, quickly, cheaply and with great ease. At Berlin, for example, there is a portable 'Doecker' school of no less than twenty-two class-rooms and a gymnasium."

Incidentally such schoolhouses as these might be made to contribute to the solution of another problem which confronts American cities, namely, the shifting of the population from one part of the city to another, due, frequently, to the opening

up of some new industry, or transfer of an old one, the result of which is that schoolhouses built to accommodate the population as it was at the time of building, become partially emptied, while in other parts of the city the congestion is so great that all the pupils cannot be accommodated.

Swimming Schools. Swimming schools are not unknown among us but their importance in America is extremely insignificant compared with the same type in London. It may be argued that in a country where so large a proportion of the population is living inland, there is not the same necessity or value in teaching swimming as in England, and this is true. Nevertheless we venture to suggest that knowledge of swimming is quite as likely to be of practical value as knowledge of baseball, or football playing, while, leaving utility aside, the sport from the mere standpoint of organized games seems to have a value of its own quite sufficient to make it equal if not superior in rank to the two games just mentioned. Moreover, while it has the desirable qualities of team work and competition which the other two games have, it is freer from their objectionable features. Certainly one could hardly devise a *cleaner* sport and, as the committee of the Swimming Association suggests, the swimming school may be one solution of the playground problem in congested districts where land is scarce and very difficult to obtain for school purposes. The Preliminary Report of the National Education Association, 1908, p. 21, says of backward children, many of whom come from the slum districts:

"One of the most astonishing phases of this work [of special classes of truants and incorrigibles] is that these boys, although they live their lives on the street, are unable to do regular physical exercises and know nothing of the games and plays of the normal boy of happier homes. They are awkward, unwieldly, and heavy-footed, with the shuffling gait and hanging head which mark the loafer and criminal as well as the mental defective, and the simplest physical tasks are beyond their strength. In a few weeks' time the change in this direction is very great. Careful drills in marching, in steps, in posture, and exercises calculated to remedy individual defects, form part of the scheme of work. Teams for basket-ball, baseball, running, etc., have been organized and the boys have learned to do creditable team work. Here again we found an unexpected ethical good resulting from something begun for other purposes. The team spirit . . . has led to pride . . . this personal pride . . . [to] self-respect."

The London Swimming Schools are arranged in "centres" so placed as to be in reach of the greatest possible number of day schools. By this arrangement 1,141 schools have the benefit of the swimming school baths. 100,000 children receive instruction in swimming. Life-saving has a very prominent place in the courses of instruction given. At stated times "a Swimming Gala" is held when various schools and swim-

mers contend for championship. Last year the contest began to take on an international type when a French team come over to play against the London children.

The following is a condensation of the long and interesting programme which was presented on the evening of our visit. The spectators' seats were crowded to their fullest capacity, the cheering on all sides enthusiastic. Except in the case of the 'fancy and scientific' swimming and number 23 of the programme, all the combatants were children under fifteen years of age.

1. Lady-Learners' Race—Across Bath and Back.
   1st Prize, Silver-backed Hair-Brush.
   2nd " Fountain Pen.
2. Junior Championship (males), Two Lengths.
3. One Length, Ladies.
   1st Prize, Silver Cruet.
   2nd " Butter Dish.
   3rd " Silver Ring Stand.
4. Senior Championship (males), Three Lengths.
   1st Prize, Gold Medal.
   2nd " Gold Links.
5. Ladies Championship. Two Lengths.
   Prize, Gold Medal.
6. Final One Length, Ladies.
7. Final Senior Championship (males), Three Lengths.
8. Junior Team Race (males).
   1st Prize, 3 Sets Gold Fronted Links.
   2nd " 3 Pocket Knives.
9. Exhibition of Fancy and Scientific Swimming.
10. Ladies' Team Race.
    1st Prize, 3 Gold Centre Medals.
    2nd " 3 Bottles of Perfume.
11. Senior Team Race (males).
    1st Prize, 4 Sets Gold Fronted Studs.
    2nd " 4 Walking Sticks.
12. Ladies, Diving.
    1st Prize, 3 Gold Plated Hat Pins.
    2nd " 2 Silver Plated Hat Pins.
13. Final Junior Championship (males).
14. Final Senior Team Race (males).
15. Final Ladies Team Race.
16. Grand Display of High, Scientific and Acrobatic Diving.
17. Breast Stroke Championship (males), Two Lengths.
18. Final Junior Team Race (males).
19. Life Saving.
    1st Prize, 2 Clocks.
    2nd " 2 Pairs Gold Fronted Links.
20. Back Race (males).
    1st Prize, Clock.
    2nd " Case of Electro-plated Salt Cellars.
21. Diving (males).
    1st Prize, Gold Links.
    2nd " Gold Plated Fountain Pen.
22. Final Life Saving (males).
23. Lady Waterlily's Tea Party.
24. Final Back Race.
25. Final Breast Stroke.

Number 23 was a variation from the serious work of the evening, being an English tea served in the middle of the bath the guests being conveyed thither in large flat-bottomed tubs, and refreshments brought on trays placed on the top of tubs. The difficulties of keeping balance while sailing in such a craft, of looking "swell" when dumped out into the water, of serving tea on such a rickety table, of posing gracefully in water deep enough to just take one off his feet, together with other incongruities of time and place, furnished the fun of the occasion.

While commending most heartily the work and spirit of the Swimming Association as a whole, we may perhaps be permitted to enter a protest against such *long* programmes, three hours or thereabouts, considering the age of the contestants, also against the custom of offering all sorts of incongruous prizes, where the activity and pleasure of the work itself should be its own reward. To divert the attention from the legitimate purposes of the training, such as physical development and good natured rivalry and the power it gives in saving life to the far less worthy aim of winning a butter dish or a cane, seems indeed a pity. Nor is this a custom restricted to the swimming schools alone. The prize system in this objectionable form, now, happily, almost obsolete with us, seems to be still a thoroughly established feature of the English school in all its types. On my table is an invitation to visit a day school on "Prize Day" when "*three hundred medals and prizes*" were to be distributed "for Regularity, Punctuality, General Progress and Good Conduct!" A system of class instruction which needs such artificial stimulation as this may well be scrutinized with very great suspicion as to the psychology of the *methods* employed. Furthermore it may be quite possible that the *fictitious* interest thus aroused may result in more harm than good by taxing the strength of immature and growing children beyond what their tender years can bear. Indeed we are informed that this was the case with the swimming competitors, at least, inasmuch as on the last contest of the year, one boy died as the result of over exertion.

Of the very great practical value of the training, however, there can be no question. During the past year alone, thirteen lives have been saved by mere children, the oldest fourteen, the youngest eleven years old. In all eighty-five lives have thus been saved, and eighty-five children's names have been inscribed upon the Roll of Honor. What a splendid record! And what a noble incentive to hold before a child's ambition! Who would wish to obscure this potential, *genuine* reward, by placing between it and the earnest eyes fixed upon it, a cane or butter-dish!

Three or four cases taken from the Report of the Swimming Association for 1907 will serve to show how soon the *real* reward may come to any child contestant.

"Thomas Knight, aged 12, of Rotherfield Street School, Islington, rescued John Poole on May 16th, 1907, in the Regent's Canal, New North Road. Four boys were playing on the towing path, when Knight, who was fishing, heard the cry of 'That boy is drowning.' He took off his coat and waistcoat, and jumped in, but was immediately clutched round the neck, and a struggle ensued. Knight, however had been taught 'Release drill' at school, and soon freed himself. He placed his hands on the other boy's face, and soon swam on his back to the bank. Here he was assisted by companions, and after a while Poole was taken home; and put to bed.

"Awarded Royal Humane Society Testimonial on Vellum."

"Henry Titlow, aged 12, of Moreland Street School, saved the life of Arthur Cooper, 8 years old, on May 24th, 1907. Cooper was fishing from a log of wood chained to the bank of the Regent's Canal, when he fell into the water about seven feet deep, and was sinking for the third time when Titlow, hearing cries for help, climbed over the wall, ran about 40 yards, and pulled off his coat and vest. He dived into the water, swam to the middle of the Canal and brought the boy to the side where he was helped out by two men. This action of Titlow's was all the more meritorious because he himself had only just recovered from rheumatic fever, and was even then suffering from St. Vitus' Dance for which he was attending University College Hospital. He had learned to swim the previous year.

"Awarded R. H. S. Testimonial on Vellum."

"Alexander Smith, aged 12, of Smeed Road School, Old Ford, saved the lives of two boys, William Hughes, aged 10 and John Biggs, aged 4, on two separate days, viz., 6th and 7th of July, 1907, both on Duckett's Canal, Old Ford. Smith had only obtained his First Class Certificate the previous year.

"Awarded R. H. S. Certificate."

"Charles Harvey, 13 years old, also of Ilderton Road School, rescued Alice Tennison, aged 10, on August 4th, 1907, in the Grand Surrey Canal, Old Kent Road. The girl, who attends a Mentally Defective Centre, was trying to walk along a narrow coping by the side of the canal, when she fell in. Harvey was 250 yards away when his attention was called, but he ran to the spot, and divesting himself of his jacket and waistcoat only, he jumped in. The Canal is deep at the place, and the girl was almost unconscious, nearly in the middle of the Canal. The parents of the girl rewarded Harvey with sixpence. [twelve cents.]

"Awarded R. H. S. Testimonial on Vellum."

Settlement Schools. One other kind of educational work remains to be mentioned, namely the Settlement School. We include this with the others described not because the work differs very much from that of our own "Settlements" but because the manner of organization of some, at least, may have practical suggestions for us. The Fern Street School Settlement, Devons Road, Bromley-by-Bow, E. happens to be the one concerning which we have fullest accounts. We glean the following facts from data kindly furnished by Miss Clara Grant, the organizer of the school.

In a district where social conditions have impelled the well-to-do-people to move away, where economic stress is so severe that one woman declared "We have to kill ourselves to keep ourselves," and another, "All the outing I ever gets is out of the washtub and back again;" where, it is said, 4.046 babies under one year of age have died in the past five years;' where "purisy", "indigestion on the lungs," "St. Viper's dance" and other strange diseases run riot; where one mother describes her little girl as having "'ooping cough, pumonia, and bronchitis, and as Dr. R. said, 'you could n't wish 'er to 'ave more"—here the "School Settlement" is trying to solve the difficult problem of how to exist. The day school is taken as the 'base of operations,' standing as it does in vital relation to every home having in it a child of school age. It is still a County Council School in the sense that it receives financial aid from the county treasury, but to the ordinary day school the usual features of "Settlement Work" have been added. It is to this feature of the Fern Street Settlement, which seemingly, might be utilized by those interested in Settlement Work, "Organized Charities" and by School Boards—this working in co-operation with the day school in the alleviation of suffering, rather than apart from it—that we wish to call attention.

To those who have never viewed Settlement life from the inside, a little further account of its activities may not be uninteresting. Among the projects which Fern Street Settlement is either already carrying out or proposes for the immediate future are the following:

Regular visiting of children's homes; breakfasts for children who cannot have proper food at home; records kept at the Settlement of each home, its needs, deficiencies, difficulties; mothers' social gatherings (at the Settlement), where there shall be "a little talk, a little tea, and a little music," meetings for fathers; a lending library for parents; lectures on Infant Care; a day nursery, where working mothers can leave their children as they go out to work and where, at the same time, working girls can be trained as 'children's nurses'; assistance in finding work for the unemployed; a medical club by means of which mothers, in lieu of a small weekly payment, may receive medical assistance for themselves and children without further pay; encouragement to, and personal watch over, girls going out to service; helping children to 'outings' in the country; distribution of old clothes for the very needy; provision of toys for the children; providing Christmas trees; interesting other children in sending toys to the Settlement, etc.

The Settlement permits no indiscriminate giving and no giving of any sort without some, though often small, return. Mothers who are too poor to buy even old clothes for their

children are permitted to pay in labor, which is utilized in making over other clothes at the Settlement or in manufacturing toys for the children out of old toys or other material donated to the Settlement. It was found, however, that some of the mothers did uot know how to cut material to be renovated, so a class was organized to teach them how.

A visiting nurse makes a part of the staff of the Settlement workers. Twice daily minor ailments such as sore eyes, throats, etc., are treated by the resident nurse. The more serious cases are cared for at home, and here we may add that in some sections in England a nurse's wages are paid out of public money, and any one within a certain limit is free to call upon her for private services—another suggestion for both the organized charities and for the Board of Health. What better assistance could be given to the congested districts of our large cities where the death rate is so alarmingly high? What better way of educating the people into hygienic living, while, on the other hand, the resident nurse might be a most efficient ally in carrying out the instructions of the Health Officers.

The English Educational System. We have already referred to the Education Act of 1902, indicating that very many of the recent innovations in Educational affairs have taken place since that time. Pausing now to take a hasty survey of the forces which are thus shaping the Educational Policy we find two, which seem to claim leadership — Parliament and the National Union of Teachers.

County Council Schools. Parliamentary action expresses itself at present in the County Council Schools, which since 1902 have superseded the Board Schools established in 1870. "*Local* Authority," vested in County Councils are now responsible for the maintenance, control, and supervision of all elementary education, even of church and private schools so far as subjects taught, and quality of teaching is concerned. In the large cities this arrangement applies under very large limitations, to secondary and higher education also, that is to say, the County Councils co-operate with institutions already established. The action of County Councils must be approved, however, by the Board of Education, 'which is the central authority intrusted by Parliament with the duty of supervising all branches of education throughout the country.'

It will thus be seen that the recent tendencies in Educational Policy are toward decentralization of power and distribution of responsibility. In its practical working this act of 1902 seems to have given a great impulse to the evolution of a consistent and efficient system of Education. On the administrative side "the Act of 1902 has co-ordinated elementary and higher education, improved and developed the training of

teachers, and raised the standard of efficiency in both elementary and secondary schools," while on the theoretical side, the opportunity is furnished for re-discussion of the whole field of method of presentation of subject matter, adaptation to age of pupils and locality, content of curriculum, etc. These discussions find forceful expression through the medium of the National Union of Teachers, of which we shall next speak.

The "N. U. T." The National Union of Teachers is a democratic organization in which each member of the Union, whether present or not at the Annual Conference, casts a vote for the officers. The association "is neither an incorporated Professional Institute nor a Trade Union, but it combines the best features of each, with certain functions peculiarly its own. It was in the first instance a 'Union' of several Associations of Teachers which had been organized on denominational lines; it is now a Union of [495] Local Associations." It includes teachers of elementary, secondary and higher schools, excluding no one "on occount of creed, party, or class of school."

This society seems to us superior to any educational organization existing in the United States, not only in its thorough organization, but in its scope; in its efficiency of action; and in its direct and indirect benefits to the members of the Union and to the cause of education in general. As many of its features may well be studied with a view to partial or complete incorporation into our own educational organizations, we state below the objects of the Union, as formulated in its official publications:

I. "To associate and unite the teachers of the kingdom of England and Wales."

II. "To provide means for the co-operation of teachers and the expression of their collective opinion upon matters affecting the interests of education and the profession."

III. "To improve the condition of education in the country, and to obtain the establishment of a national system of education, co-ordinated and complete; also to secure for all Public Elementary Schools adequate financial aid from public sources, accompanied by suitable conditions."

IV. "To afford to the Board of Education, the Local Authorities for Education, and other organizations—public or private—which have relation to educational affairs, the advice and experience of the associated teachers."

V. "To secure the effective representation of educational interests in Parliament."

VI. "To secure the compilation of a comprehensive register of teachers, and to promote and extend the influence and dignity of the profession of teaching. To secure the recognition of the Union as a Diploma-granting Authority."

VII. "To watch the administration and working of the various Acts, Codes, Minutes, and Directories; to endeavor to amend their terms and administrations when educationally desirable; and to endeavor to secure the removal of difficulties, abuses, and obsolete regulations detrimental to progress."

VIII. "To raise the qualifications and status of teachers and to open to the best equipped members of the profession the higher posts in the educational service of the country, including the Inspectorate of Schools."

IX. "To promote the welfare of the Teachers' Provident Society and the Teachers' Benevolent and Orphan Fund."

X. "To watch the administration of the Superannuation Act and the Pension Minutes, and to endeavor to secure their amendment."

XI. "To afford advice and assistance to individual members in educational and professional matters and in legal cases of a professional nature."

XII. "To extend protection to teachers wrongfully dismissed."

Among the reforms which the Union claims to have accomplished are Education Acts and Amendments to Education Acts and Factory Acts; the extension and liberalization of curricula; the abolition of rigid aud unnatural classifications of scholars by mere age; the reduction of over-pressure on yonnger pupils; the establishment of more hygienic conditions of study in school; improvement in the enforcement of school attendance; extension in the school life of children; reductions of the "Half Time" system; the abolition of universal annual examinations of schools; the abolition of the examination of each scholar; better adaptation of studies; improvements in methods of inspection and examination and teaching; extension of facilities for the training of teachers; revision of regulations for day and evening schools; election of educational experts on governing bodies for education. It acts as a medium of communication between teachers and Parliamentary and other governing bodies; gives professional counsel, legal advice and social companionship to its members; affords members help at law if prosecuted, libelled, or otherwise defamed. "It has established a Provident Society enabling its members to obtain at lowest rates, annuities and sick and death payments, to accumulate savings, and to purchase their houses." "It has established a Benevolent and Orphan's Fund which maintains two orphanages. It grants temporary relief and annuities to infirm teachers, and widows of teachers, and renders other beneficent help."

"By repeated claims, by representations to the Education Department and to Members of Parliament, and by resolutions in the House of Commons, it has secured the establishment of a general scheme of superannuation for certificated teachers."

"Each year the principal regulations issued by the Board of Education are brought together and are published with explanatory notes incorporating all the latest official and legal decisions bearing on educational work."

"The National Union of Teachers sends representatives to outside meetings of other associations having an educational or sociological bearing, including International Conferences, and

receives such representatives from other countries, thus enabling the members to compare national educational ideals. It aids visitors from other countries who wish to visit English Schools."

The Union "has secured the retention of the right of reasonable corporal punishment by head teachers, and the recovery of the same prerogative for certificated assistants in many localities"; the reduction in the ratio of pupil teachers to adults; the right of appeal against disastrous reports by inspectors, and against the suspension or cancellation of diplomas; freedom from secret reports and log-book entries by inspectors and principals. Reports adverse to teacher must now in many schools be shown to the teacher before presentation to the local authority and the teacher must be allowed to present his or her side of the case at the same time that the adverse criticism is made. In many cases salaries have been increased and lowering of salaries prevented.

2,432 members of the Union received advice on educational matters last year. Legal advice is also given free. 170 legal cases were dealt with last year by the Education Committee. Legal assistance covered claims for damages and salary, cases of corporal punishment, assaults on teachers, illegal dismissal, libels, etc.

Among the results for which the "N. U. T." is still working, are the extension of secondary education, especially for rural pupils; equality of salaries for class mistresses and class masters working in mixed or boy's departments; less irksome conditions of service; more freedom in selecting subject matter taught; earlier promotion of efficient teachers, 'a uniform scale of salaries'; reduction in size of classes; retention of girl's schools for women teachers; prevention of combined departments "which close the door to promotion for women."

The Union claims to be the greatest and most influential organization of teachers in the world, and asserts that nearly all the improved conditions of school life are due to its efforts. Certainly much has been done even if much still remains to do. Can we point to a similar organization on this side the water which has accomplished as much? To be sure we may not agree that all the ends accomplished in the N. U. T. would be desirable in America, but that is merely a matter of detail in adjusting to home conditions. In our own Teachers' Associations, whose work is largely limited to the discussion of purely professional subjects, we seem to have come nearly to a s'and-still with nothing more profitable to do, unfortunately, than to thresh out the same old straw which was brought to the pedagogical mill a decade or two ago. Would it not be an exhilarating variation from eloquent platitudes respecting the nobility

of the teaching profession, and endless discussions on comparative merits of classical and scientific studies, to really *do* something. Suppose the teachers should *prove* the nobility of their profession by bringing all their united influence to bear upon such problems as the banishment of "graft" from the adoption of text-books, the building of schoolhouses, and the election and dismissal of teachers; upon the securing of medical inspection in schools; of separate rooms for backward children; libraries for country schools; suitable playgrounds; rest rooms for sick children or teachers; smaller classes; adjustable seats and desks for growing pupils; evening schools for those whom the day school does not reach; trade schools; representation of women on school boards; Parents' schools where Genetic Psychology should be studied, and methods of teaching explained, to the end that parents might *co-operate* in Educational Reforms, not work against them as is so often the case now.

Suppose the whole teaching body should demand, and back up the demand with legal procedure, public meetings or whatever means are necessary to accomplish the purpose, that the eyes of the children no longer suffer through the use of shiny desks, and glazed paper in text-books; that the selection of text-books be in the hands of experts, not left to some ignorant member of a school board who never taught a child, and whose sole criterion of choice in books is the amount of commission offered. Or let them demand that equal salaries be paid to men and women for equal work, thereby checking the present tendency to drive men out of the teaching profession by placing cheap labor on the market; that malicious libels and unjust dismissals on the part of principals and superintendents or other teachers, be punished by forfeiture of position and disqualification to hold any educational office or position thereafter; that indemnity be paid to those who have thus suffered. The writer could name a school in which, within two years' time, nearly every member of a Faculty of twelve or fifteen teachers, one after another, was either summarily dismissed or forced to resign. It is true the principal lost his own position during the second year, but this did not in any degree undo the harm which he had wrought his teachers.

Do we say "It is of no use, we could not bring about these reforms?" Our English cousins are showing us that it *is* of use, that teachers if united *can* bring about reforms in educational methods and administration, and that, too, in the face of inertia and opposition which is absolutely unknown to us. It seems a little incongruous, perhaps, that England should teach America Democracy, but the criticism which the English teachers who visited the United States, make upon our

School System—that it is "undemocratic"—is undoubtedly just. Teachers have no choice either in the selection of their co-laborers, or of the men under whom they are to serve.

These are some of the sadly needed reforms which touch most closely, perhaps, the daily life of teacher and pupil, but these are not all. Considering the educational system of the United States in the broader international bearing of its great power, as Mr. Mosely suggests, in determining what rank the United States shall attain among other nations,—from this point of view, also, the deficiencies of our School System become painfully apparent. With England, France and Germany, where changes are made by the Central Government, *any* advance means practically advance along the whole line. With us it may be purely local. Accustomed to fix attention upon the most progressive states or cities, we lose sight of those that are lagging behind.

We need, then, first of all

(1). More spurring up by public sentiment of the *laggards* in the race, which when it has accomplished its purpose will give more solidarity to the educational work, and more opportunity for co-operation in efforts to improve existing conditions.

(2). Local Teachers' Associations having for their object the bringing about of specific local reforms in Education, these organized again into State Associations with power to influence Legislation in favor of Educational needs.

(3). Inclusion within the reach of Educational Instruction of every individual within the boundaries of the United States, implying, of course, curricula broad enough and flexible enough to fit some, at least, of the needs of every individual person, extending thus the limits of the "school age" so as to cover the entire life.

(4). More careful husbanding of the "waste products of society"—a study of the causes which have produced these products, and removal and prevention of the causes. This should be done, not only in order to transform the "social waste" to "social wealth", but in order that the knowledge thus gained may be utilized for the better training of the whole body. To carry out this work, many more schools for defective children and adults will be necessary, free medical inspection, free hospitals where children may be treated, trained nurses to see that instructions are carried out, more industrial schools, trade schools, more evening schools, far better training for teachers than at present, especially for teachers of backward children; extension of Settlement Work to all the slum districts, swimming schools to help 'clean up' the slums and supplement the playgrounds.

(5). *All instruction* FREE.

Is the question raised as to where the money is coming from for all this vast expenditure? The answer is "From the funds now wasted in Graft." Only a few days ago the writer was told that in one of our largest cities the school tax per dollar is more than twice the amount of the actual cost of the schools. And yet the city is short of funds to carry on its educational work!

Conclusion. Such, briefly, are the lessons and suggestions which the Twentieth Century Crusade yielded to one member of the Five Hundred. Standing amidst the monuments of England's glory and of her shame, we could not but look forward to a time when two thousand years of our own history shall be epitomized in painting, sculpture, and wax, and could but wonder if it, too, shall have its "Chamber of Horrors," to humble the pride of future generations! We must admit that there is much of truth in the charges which England brings against us, of political corruption, of infidelity to public trust, of superficiality, and other lesser faults adhering to our younger, cruder, and in many respects sadly defective institutions. Only by acknowledging these defects are we likely to overcome them and only by the study of more perfect models are we likely to be fully conscious of their presence. Just here comes in the value of a Dynamic Pedagogy which, keeping fast hold of those elements which are desirable and even essential to the best development of American life, shall yet reach out on every side for suggestion and inspiration with respect to those features in which other nations are our acknowledged superiors. To establish such an international exchange of ideas in education, using the word in its broad sense, is only to extend the policy which we have long since recognized to be the true one in the building up of industries and institutions. To us who were fortunate enough to share the generous opportunity given during the past year, for just such interchange of thought, it seemed as if we had little in comparison to offer to those coming to the United States for similar study. And yet, reverting to the report of Mr. Mosely, we dare to hope that even in America there is something good and at the same time truly American. Thrown into contrast with English characteristics and conditions, perhaps the home possessions which seemed most precious as we turned toward them once more were the following:

(1). Individual initiative, which, so far as our observation extended, is largely lacking in English schools.

(2). Free *secondary* as well as free elementary schools.

(3). A fluidity of social conditions which acknowledges no fixed barriers of cast or class.

(4). Power of quick adjustment to changing conditions.
(5). Faith in the ability and integrity of the masses.

These, we venture to think, are qualities with which we should not willingly part, and qualities which our school system will do well to foster. How to keep this vital content while perfecting the form; how to combine the vigor and individuality of our young life with the richness and mellowness of age—this is our problem. If such characteristics of American life as those above named commend themselves to the study of our friends across the sea; if it be true that, intent upon the capture of educational spoils, both their and our invading armies have profited by this campaign carried out in the interests of Primary and Secondary Education, then, would that we might dare to hope for some self-sacrificing knight to extend the field of operations, and to lead a Second Crusade recruited from College and University ranks.

THE ACQUISITION OF TECHNICAL SKILL

By Louise Ellison

Experimental studies of "technical skill" are extremely few and limited for the most part to American psychologists. The earlier work on learning was begun on verbal material, the more complete forms involving motor and psychic co-ordinations being left to a later date. This method of procedure is, however, only to be expected, and perhaps on the whole the most practical, considering the fact that the bulk of the school work is and always has been limited to verbal memory.

The earliest studies on the subject of memory were made by Ebbinghaus (13) in 1885 with himself as subject. 2,300 nonsense syllables taken at random were formed into series of different lengths. Several series were used at one sitting, each series being read until it was possible to repeat the whole series by heart without hesitation if the first syllable was given. His results are as follows: (1) The longer the series the longer the time spent on each syllable. (2) The more repetitions, the less time spent on each syllable in relearning. (3) The more repetitions given to a series, the fewer repetitions necessary in the future. (4) If syllables learned in one order were relearned in a different order, the time for relearning was increased. (5) The fewer the syllables skipped, in a derived order, the greater the saving. (After learning six original series, six derived series were learned in which 1, 2, 3, and 7 syllables were skipped.) Fewer associative bonds between the individual members of a series are, therefore, to be inferred, and the tendency of every syllable to bring the other members with it in case of its return to consciousness. (6) the progress of forgetting is first rapid, then slower. After one hour $\frac{1}{2}$ is forgotten, eight hours $\frac{1}{3}$, twenty-four hours $\frac{2}{3}$, six days $\frac{3}{4}$, and thirty days $\frac{4}{5}$. (7) A long series was retained better after once learning than a short series. (Of course the greater number of repetitions each syllable receives in the longer series would account for this.) (8) There seemed to be a rhythm of attention, a series learned with few repetitions usually being followed by one which required a greater number. (9) Sense material was learned with $\frac{1}{10}$ the number of repetitions necessary for nonsense material.

Ebbinghaus's experiments led to other investigations of similar sort and to problems suggested by them concerning the

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economy and technique of learning. Such questions were raised as the relative speed at which adults and children learn; mental types and the peculiarities of the different types as regards rapidity of learning and retention; the value of massed or scattered repetitions; the progress of fatigue; the natural methods of learning and whether they were as advantageous as other methods. Only a general account of the experiments and their results will be given.

Contrary to opinion, children do not learn as quickly as adults, and are fatigued more easily, 12-syllable series tiring eight-year-old children so much that they can hardly learn them, while an adult can learn a 24-syllable series at a sitting with almost no fatigue (22).

Jost[1] (23) investigated further the question of massed and scattered repetitions, learning series with thirty repetitions the first day, then series with ten repetitions on three successive days, and found that learning on successive days gave better retention after twenty-four hours than massed repetitions. For more extensive material greater separation of repetitions was better. His conclusion was that older associations are more easily revived than younger ones; in scattered repetitions we are working with older associations, and in massed repetitions with younger associations. For shorter and easier material his law does not hold. Here learning at one sitting gives the most economical results.

A brief consideration of the relation of the different mental types to learning shows that changing from a visual to an auditory method of learning results in a loss of speed (22), (23), but that practice tends to equalize the methods of all learners. In addition to the classification into different sensory types according to preponderance of one kind of mental imagery, there is a broader classification into learners of the slow or quick type, or as Ogden (25) distinguishes them, the intellectual type and the sensory type. To the former belong persons who "with very slight play of the imagination grasp the material *as it is*, holding to its objective factors and adding very little of a subjective nature. Stray suggestive elements such as might call up reproductions not directly bearing on the matter at hand are avoided." The sensory type is subjective rather than objective, working rapidly and intuitively. Meumann (23) thinks the difference in rapidity of work in different individuals is a matter of adaptation of attention. He finds three grades of learners—the quick learner who quickly adapts himself to the task and is quickly fatigued, the learner of moderate speed who adapts more slowly and fatigues less

[1] Reviewed, *loc. cit.*

slowly, and the slow learner who adapts himself with difficulty and is not easily tired. He thinks that these differences tend to disappear as the subjects all become more practiced. With this Ogden's experiments disagree, indicating that, though all subjects increase in speed, the slow learner still requires more time than the fast learner.

Ebbinghaus (13) found that reading at a quick tempo saved time in the learning, but Ogden showed that this was not so economical as slower rates, for while it effected a saving in time, it necessitated a greater expenditure of energy, as a greater number of repetitions was necessary. He advocates a slower method for the logical type where a full consciousness of every factor is desirable, and a faster rate for the sensory type where attention is always on groups. Meumann would harmonize these two methods into one, which he found to be the more natural method, when he allowed his subjects to regulate the drum at their own rate—namely, to go very slowly at first, until the material is clearly grasped, and then to proceed at an increasingly faster rate.

Meumann (22) found the quick learner to be the quick forgetter. This is without doubt due to the fact that the quick learner makes fewer repetitions, and for retention it is repetition which counts. Experiments show that for retention more than enough repetitions to just learn matter are necessary, both for sense and nonsense material.

Some subjects (23) work, using all the auxiliary associations which occur, but these tend to disappear with practice, indicating a difference in habit rather than in mental organization.

Lottie Steffens (31) found that the method taken by subjects when simply requested to learn verbal material was to divide it into sections, repeating each section a number of times before going to the next. The first lines (of poetry) were repeated oftener than the last, and the more difficult lines were emphasized by many repetitions. Then by a separate effort the parts had to be associated. The reasons for reading by the part method are that one feels he is progressing rapidly because he can see his progress, and the more difficult parts can be given a greater number of repetitions. But according to Miss Steffens's results, learning stanzas of poetry or series of syllables by reading the whole through before repeating gives better results than the more natural method. She gives the following reasons for the superiority of the whole method. 1. If one learns by sections the break between sections is especially marked. The special repetitions are avoided in the whole method. 2. In interrupted learning numerous associations are formed which must be a hindrance later, since at the end of each section one returns to the beginning of the same, and

the end of a section is associated with its beginning instead of with the beginning of the next section. Thus interfering associations must be at first voluntarily suppressed through a special learning at the break. 3. In learned matter, not only are the successive members in firm association, but the more separate members are united through mediate association, and so we impress the separate members on ourselves by noticing their place in the whole. Both mediate association and absolute place are strengthened by learning as a whole, while by the part method this aid is weakened or entirely done away with, for the earlier lines do not stand in connection with the later. 4. By the whole method all the parts receive equal emphasis.

Meumann's (14), (22), (23) results from experiments on this subject show that for adults and children the advantage of learning by the whole method is greater the larger and more extended the material, and is more evident in sense material. The whole method gives better retention than the part method. It effects a saving in both time and number of repetitions. By this method associations are formed only in the directions in which they are to be given later, the logical connection helps the formation of association, and the better grasp of the connection holds the attention better, for the material is bound together as a whole, and every part receives an equal number of repetitions. The attention is more evenly divided and senseless mechanical repetition is avoided. But the method has its disadvantages. Müller and Schumann and others have shown that at the beginning of the task the attention is stronger, due to fresh attention and energy, and at the end, due to the pleasure of getting to the end of a dreary task, the middle receiving a less degree and being learned slowest. Therefore the middle parts by the whole method are apt to be forgotten easily. A second objection rests on the fact that all material is not of equal difficulty throughout. A combination of the whole and part method obviated these difficulties in the mixed method. The material is divided into parts, and after each part is read a small pause is made, then the next section begun, but the whole is read from beginning to end. Thus the weakness of associations in the middle parts is overcome, and the more difficult parts are attacked with fresher attention. When the matter offers especial difficulties in parts it is best to learn by the whole method until these parts stand out as difficult, then to learn these and go back to the whole method again. The mixed method gives the quickest results, but the whole (which requires more repetitions than the mixed) gives strongest retention.

Learning may be for the purpose of immediate reproduction or for permanent retention (22). For the former a high de-

gree of concentration is necessary, for the latter repetitions are the prime requisite, attention being a secondary condition. In every instance the *will* to learn is essential. If one thinks one cannot make further progress, repetition counts for little. A striking case given by Radossawljewitsch, who gave a foreigner not understanding German a series of syllables to learn. The subject not understanding the directions, read the syllables forty-six times without learning. When asked if he could repeat the series he exclaimed, "What! Am I to learn them off?" Then with six repetitions he learned them.

Ebert and Meumann (14) found that intervals of no practice caused no deterioration and give as a reason the fact that too frequent repetition tires and dulls one, while after a rest he returns to his work with a renewed impulse and freshness of attention; they suggest that a certain time is necessary for physiological processes in the cells, brought about through practice, to become constant and reach their full height.

Experimental and pathological evidence substantiates their suggestion. Müller and Pilzecker (24) found that a certain time was necessary to set the impressions made by the required number of repetitions of nonsense syllables. If after the *learning* the subjects learned other series, gave their attention to interesting reading matter or studied the details of landscape pictures shown to them, the reproduction of the syllables took a longer time and showed more mistakes than if they walked about the room in the interval and thought of nothing in particular. And the more the distracting matter claimed their attention the greater the interference. This was not because they were kept from thinking of the syllables, because these seldom sprung into consciousness until hours later and in many cases they were not thought of at all.

The same phenomenon is described by Dr. Burnham (9) in his paper on "Retroactive Amnesia", where he shows that frequently after a shock which causes unconsciousness, not only the incidents of the event have been forgotten, but the amnesia may extend backward for hours. This necessity of time for the setting of associations has obvious pedagogical bearings.

A few experiments show the great importance of the motor element in learning verbal or disconnected material. W. G. Smith (29) had subjects learn letters written on a card both with and without distraction. The distractions were of three sorts: (1) addition by twos, or threes, (2) repeating the syllable 'la', (3) tapping with the finger—in each of the distractions keeping time with a metronome. Addition was the greatest distraction and tapping the least. T. L. Smith (28) found that 13 to 18% more errors were made if her subjects counted aloud while syllables to be memorized were shown

them. This was not a matter of distraction, as experiments in learning the characters of the manual alphabet show. If subjects were allowed to make the character with their hands when the card bearing its picture was presented, 11 to 22% fewer errors were made than when this was forbidden.

Somewhat similar results were found by Breese (5). Series of numbers were read to subjects and they were to remember them (1) in the most natural way; in this case *every* subject repeated the numbers as given; (2) while holding his breath, whereby the tendency to pronounce was suppressed, and (3) holding the breath and enunciating the names of the digits. Of the artificial ways the third method, which would appear to be the most distracting, gave far fewer errors, showing that in the second case it is the inhibition of the motor element which lessens the ability to learn. Color series were also given to learn. If the subject was allowed to pronounce the names, he remembered much better than when this was forbidden. The author believes there is an impoverishment of consciousness when the motor element is inhibited, advocating as a pedagogical corollary a greater development of the motor element in the schools.

Experiments of a simpler muscular sort, yet involving some degree of skill, are reported by Johnson (18). They are (1) tapping continuously at the corners of an equilateral triangle of 20 centimeter dimensions as fast as possible; (2) drawing circles; (3) tapping with the left great toe as fast as possible; (4) beating with a signal. The records show a gain in rapidity and a reduction in the irregularity of the voluntary movement. When practice is carried on until the movements become irregular, it becomes injurious, for the wrong adjustments tend to be established as habits, and delay progress.

Woodworth's (38) experiments in aiming successively at three dots fifteen centimeters apart forming an equilateral triangle, and in aiming in succession at each of the squares of co-ordinate paper, show that as the subject increases in skill his individual trials agree more closely with one another. A high degree of variability indicates possibility of further improvement, a low degree, that improvement has reached its limit unless some new way is taken. Improvement is not steady, but irregular, and appears early and increases rapidly.

Münsterberg[1] performed some simple experiments to find whether a habit associated with a given sensory stimulus can continue automatically while a previous and different habit associated with the same stimulus remains. He had always carried his watch in his left-hand pocket and taking it out on that side

[1] For review see (2).

had become automatic. He practiced taking it out on the right side until this habit was automatic. The watch was then returned to its former pocket and it was found that some effect of the first habit remained, although the second had become automatic, for the first habit was more easily relearned than the second one had been learned. If the process of alternating was continued, the time for relearning each habit decreased.

Bergström's (3) results from card sorting experiments where the cards were assorted according to one order and then according to another immediately afterwards, results in a greater amount of time and number of errors in the second series due to the inhibition from the first associations which persisted.

Bair (2) disagrees with Bergström on the evidence of his own experiments, objecting that Bergström's investigation was not carried to sufficient length. In his own experiments a series of letters and colors were associated with certain keys of the typewriter until the habit of reacting became automatic, then the same series was associated with different keys, then a different series of colors and letters with the first set of keys and with different keys, each series of reactions being practiced until it became automatic. The interference of association was determined after each transference from one reaction to another. Another set of experiments consisted in repeating the alphabet from memory for twenty days. First it was repeated forward, then the letter *n* inserted between the others, then backward, later intercepting n. At the end of twenty practices the alphabet was repeated forward intercepting x, repeating three times; intercepting r, repeating three times, and backward intercepting x and r, repeating three times. His conclusions are that a habit associated with a given sensory stimulus or series of stimuli can continue automatically while some effect of a previous and different habit associated with the same stimulus or series of stimuli remains.

"By returning to the old habit each time one becomes automatic, it takes a progressively shorter time to relearn that habit, until finally either of the two habits becomes automatic, one needing but to start the impulse in one direction or the other, and the responses continue and the adjustment is maintained just as easily as though that were the only response or adjustment ever acquired to that situation."

One of the earliest and completest investigations of the acquisition of technical skill was made by Bryan and Harter (6) (7) in their studies of the physiology and psychology of the telegraphic language. Because of its importance the investigation merits a somewhat detailed account. Eleven months were spent in collecting the data, part of which was obtained by personally questioning thirty-seven operators, part from curves obtained

from a school of telegraphy and part by testing two students as to their speed and accuracy in sending and receiving once a week for forty and thirty weeks respectively. There are specialists in telegraphy; a train dispatcher and a commercial operator being lost if he tries to take the other's place. From two to two and one-half years are necessary to become an expert, but few operators are willing to put forth enough practice or effort to reach this stage of proficiency. The Morse code is made up of dots and dashes, a longer down stroke being a dash and a short a dot. The main difficulty in distinguishing letters is to distinguish between the dots and the back stroke of the armature. The learning curve rises rapidly at first, for in a few hours or days the student is able to distinguish all the letters, but he must relearn them many times because of the difficulty of the back stroke. Later the letters fuse together and words are distinguished, and then larger phrase and sentence units. The sending curve rises more rapidly and uniformly than the receiving curve, but after the rise all the curves show a long, flat curve, "plateaus", when the speed is just below the slowest main line rate. Many students become discouraged and give up here. Then there comes another sudden rise just above the main line rate followed by another plateau, and later may come a third rise which takes one over into the class of experts. The receiving rate finally rises above the sending rate. The receiving curve, which is less regular, shows many short plateaus followed by rapid improvement. Receiving is a more complex performance than sending because of the back stroke. Also the opportunity for practicing receiving is less than sending and the student enjoys it less, hence inclines to give it less attention. It is an important fact that years of daily practice in receiving at ordinary rates will not bring a man up to his own maximum ability to receive. Men whose receiving rate has been on a level for years, frequently rise to a far higher rate when forced to do so in order to secure and hold a position requiring higher skill. Hence the writers infer that in learning telegraphy it is intense effort which educates—that every step costs as much as the one before it.

No one is able to omit the period of plateaus. These are explained as indicating that the lower order habits are approaching their maximum development, but are not yet sufficiently automatic to leave the attention free to attack the higher order habits; the sudden rise represents a realization of powers potentially present by reason of preceding gradual unconscious habituation. When the letters are perfectly learned one groups words as units, then phrases and then sentences. These higher order habits may crop out in the earlier stages, but as

the learner has to adapt his rate to his utmost speed to avoid possible confusion, it is not until the lower habits are perfected that the curve rises. The operator comes to grief if he tries to attain a high speed at the expense of accuracy of detail.

In receiving, the beginner copies after each letter, but as he grows more expert he is able to wait and "copy behind" words, then phrases, then sentences. The same sort of thing is to be seen in the reading of the blind when the letters are accounted for as the finger passes over each one, then one reads with the finger words, then sentences, ahead of his voice.

Swift (34) found results differing in some respects with Bryan and Harter's and agreeing with them in others. His experiments dealt with (1) learning to keep two balls going with one hand, receiving and throwing one while the other was in the air, (2) learning shorthand where he himself was the only subject, (3) learning to control the reflex wink, (4) learning Russian (33), (5) learning typewriting (32).

In ball tossing the curves all show that progress is by leaps. For several days the subject makes no progress, then there comes a sudden rise followed by a halt. Swift believes that plateaus are due to lack of energy due to waning interest. Periods of delay often represent a physiological limit with a particular method, and improvement only comes when a new procedure is introduced.

The subjects improved by hitting upon some advantageous method unconsciously and adopting this. The subjects who chose the best methods first, rose in skill most rapidly, which gives an important hint for pedagogy. These methods were consciously chosen then passed into the automatic. Too great effort impeded progress because attention was turned to elements which should be subconscious. The effect of a successful throw was a repetition of a similar manner of throwing and an unsuccessful one, of a slight change.

After the right hand had attained considerable skill, the left hand was tested and found to have gained also, but here progress consisted in a transfer of methods rather than in training.

Highest throws never come at the beginning of a day's test, but a certain warming up time was necessary.

After the last regular tests three subjects were tested every thirty days for five months, and an increase in skill instead of decrease was shown. James's dictum that we learn to skate in summer and swim in winter is here experimentally proved. Bourdon's (4) experiments also show that there is at least no loss during short intervals of no practice and that even after eight years some effects of the habit persist. His results were obtained from work with the ergograph, association of foreign words with French equivalents, adding aloud and mentally,

marking letters in a test, and associating with a series of words the name *substantive*, *adjective*, *verb*. Like Johnson and Bryan and Harter, he found progress rapid at first and then slower.

Swift's (34) shorthand study shows plateaus due to the fact that associations are formed which the learner has no opportunity to use, but after enough knowledge has been accumulated to meet the demands of the test, his curve rises. For experiments in learning the control of the reflex wink (34) the subject sat before a framed piece of plate glass which was struck at intervals by a felt-covered hammer. So long as the subject's efforts were directed toward inhibiting the wink, there was little improvement, control only coming when attention was on something else. By beginning with the muscles near the eye muscles, one could gradually get control of the eye muscles themselves. The same phenomenon was observed by Bair (1) in his experiments in learning to move the ear. The subject was given the idea of the movement by stimulating the retralaus muscle with an electric current. But this was not sufficient for the subject to get control of the ear. In his great efforts to reach the ear, a surplus of motor energy was discharged into neighboring muscles. The brow was raised, teeth clinched,and finally the ear was moved—but by elimination from movements already under the control of the subject. The idea of the movement was a help, however; for the subjects recognized they were near it and recognized it when they got it. Subjects who had not had the electrical current applied did not learn so quickly on this account.

Experiments in learning Russian (33) and learning typewriting (32) show stages of sudden progress with slight depressions in the curve at times. Here both letter and word habits were present from the start and progressed together, the letter habit the more rapidly. Even in the higher stage of phrase habit, word habits showed their persistence. In his criticism of Bryan and Harter's statement that the rise cannot come before the lower order habits are perfected Swift seems to overlook the fact that the telegraph operator has to adapt himself to a uniform rate which cannot be faster than his least abilities allow, while in the material Swift studied the learner can take a slow or fast rate, according to his ability and the general difficulty of the work before him.

The fact that each particular element in the learning process is not completed before higher elements appear is also found in the experiments of Leuba and Hyde (21) in learning to put English prose into German script, and to change English prose which was written in German script into English script. Progress consisted in a short circuiting process. First the German-English alphabet has to be referred to, then the per-

ception of the German letters is no longer necessary. The speech-motor elements drop out and a direct connection is formed between the visual image of the German letters and the cue to the motor discharge. The writing finally follows automatically on presentation of the script. Groups of letters are later substituted for individual letters. Some subjects were practiced twice a day, another set once, and a third set every third day. Those who worked twice a day gained the least, and those who practiced every third day, the most. The daily records show a decrease in efficiency in the second five minutes, a recovery in the third five minutes, and an additional rise in the last five of the twenty minutes.

One of the most valuable and comprehensive studies on the learning process was recently made by Cleveland (10) in his investigation on learning to play chess. What he considers the most important feature of learning the game is the progressive generalization of knowledge, making possible the attention to larger and more complex units. First the subject learns the names of the pieces; then comes a period of premature play with concentration on single names and pieces. Later one can look further ahead and grasp wider situations. In constant playing details sometimes accumulate so fast that the learner is confused, but when these are organized in permanent courses, the subject *knows* more at first than he can put into practice, because his attention is concentrated on one feature of the game, while the expert player grasps the situation as a whole. But details cannot be organized into larger groups until they gather meaning as a group. The emotional factor makes for improvement, a poor play causing displeasure and a good, pleasure, thus emphasizing itself. A learner is helped by mistakes provided he recognizes them as mistakes, but if he does not he falls into bad habits of play which impede his progress. Thus the importance of a teacher is seen. But too many instructions must not be given at once; for they only confuse the subject and he will not be able to profit by them until he is ready for them.

Book's (3a) exhaustive study on the acquisition of skill in typewriting shows that short periods of retardation of progress are due chiefly to lapses in spontaneous attention and effort, and the attempt to equal on a bad day, when powers of concentration and effort are poor, a score attained on a preceding good day when attention was keen, resulting in the development of wrong habits. The larger "plateaus" represent resting places in interest and effort, or periods when attention and effort are wrongly applied and wrong habits are developed which have subsequently to be corrected. Plateaus are not a necessity nor do they represent periods of progress. Progress during periods

of no practice is due to the disappearance of bad habits and interfering associations, which leaves the more firmly established associations free to act.[1]

Summary

1. Children's ability to learn for immediate recall is less than that of adults; and they are greatly fatigued by material of moderate length. Children require a greater number of repetitions than adults.

2. Sense material is ten times as easy to learn as disconnected material. The value of having the pupils thoroughly understand the material to be learned, therefore, needs no emphasizing.

3. But even with complete comprehension much mechanical repetition is absolutely essential, as repetitions sufficient to bring the material learned to its first complete reproduction is by no means sufficient to insure its retention.

4. The more repetitions given in the first learning, the fewer repetitions will be necessary for relearning, up to certain limits.

5. It is more economical to divide the repetitions into groups at not too great an interval apart than to mass them all into one sitting.

6. The natural learning method is not always the most economical method. The whole method is more economical than the more natural part method, but for material of unequal difficulty the mixed method gives quickest results and best retention.

7. Attention is a prime requisite, but cannot take the place of repetition.

8. There are variations in learning types, but practice tends to equalize all types. The fast learner should be encouraged to emphasize by repetition what he learns, and the slow learner to concentrate his attention immediately and fully.

9. Indications are that there is a development and organization of what has been learned which goes on in the lower unconscious level—that time is essential for impressions to become set and connected with the rest of our mental contents. Turning abruptly from one subject which has had a high degree of attention to another subject requiring a similar concentration, as is done in the schools, may be a bad thing, as it interferes with this organizing process.

10. Intervals of no practice, particularly in more motor

[1] Dr. Book's article arrived after the present paper was in the hands of the printer, so that the more extended treatment which it merits could not be given.

feats, are not a disadvantage, and in some instances represent periods of progress. This suggests that it might be more economical to study subjects on alternate days or even at more distant intervals than to attack them every day.

11. Learning is by leaps, followed by intervals when no progress is apparent.

12. Plateaus are indispensable periods in which what has been taken in is assimilated. A plateau indicates sometimes that no further progress will occur until new methods are adopted. Sometimes they point to a halt in the effort.

13. Intense effort and desire to progress are necessary.

14. Much of progress consists in adopting new methods. Here the value of the teacher in giving practical suggestions is seen, but methods suggested before one is ready for them will be of little worth. Swift's subjects had to get a general idea of the throwing before they could notice methods, and Bair's subjects could not move their ears until they got the movement of the whole scalp. One must proceed from the general powers one has to special ones which may be developed from them.

15. Learning is a short-circuiting process, individual elements being organized into larger and larger units and dealt with as wholes.

16. Mistakes are an advantage if the learner recognizes them as mistakes and takes account of them. But if they are not so recognized, he falls into bad habits which persist and impede his progress. This is one of the chief objections to working without attention. Better to have shorter practice periods and greater attention and care.

17. Two habits of reaction may exist simultaneously without interference if both are sufficiently automatic.

18. Errors should be avoided from the start to escape the evils of interference of association from bad habits which will later have to be overcome.

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STUDIES OF A CHILD. IV. "MEANINGS" AND "DEFINITIONS" IN THE FORTY-SEVENTH AND FORTY-EIGHTH MONTHS.

By Alexander F. and Isabel C. Chamberlain

The "word-meanings" here considered were all obtained, between June 10 and July 30, 1905, from the authors' little daughter, then in her forty-seventh and forty-eighth month, and innocent as yet of day and of Sunday school. The record was made in sections (each representing a continuous session with her) as follows: Noun list: *Acorn-Bit*, June 10; *Bitter-Blind*, June 12; *Blind-Buttonhole*, June 12; *Cage-Cup*, June 14; *Daisy-Dustpan*, June 15; *Ear-Floor*, June 16; *Flower-Fur*, June 17; *Garden-Gun*, June 18; *Hail-Iron*, June 19; *Jackstones-Lunch*, June 20; *Macaroni-Mutton*, June 23; *Nail-Nut*, June 30; *Oak-Poker*, July 5; *Present-Satchel*, July 18; *Saucer-Sieve*, July 19; *Silk-Thimble*, July 20; *Things-Zinc*, July 23. Verb list: *Ache-Hug*, July 23; *Hurry-Remember*, July 26; *Roar-Stand*, July 27; *Stay-Yawn*, July 28. Adjective list: *Afraid-Surprised*, July 29; *Thick-Young*, July 30. Adverb list, pronoun list, preposition list, interjection list, conjunction list, July 30. The words are arranged in the order in which the meanings were asked, and the answers are exactly as they were given, without any change whatsoever. The question asked was always, "What does —— mean?"

While not, of course, including all her knowledge at the period in question, and being, therefore, not an exact and complete epitome of herself and her relations to her various environments, they do give, as it were, a partial cross section of her activities and her ideas at the close of the fourth year, which is of considerable psychological and pedagogical interest, in connection with the investigation of the content of the child mind at different epochs. These "meanings" are of all sorts, from simple to complicated, and from those quite unsatisfactory to those lexically or psychologically perfect. The record is also of value for philological and grammatical research in child speech:

I

A

Acorn. It's meant for a pineapple. It's meant for a pineapple. Just the same. I can help you and sharpen whatever you say.

Afternoon. Let me hold the pencil while I 'm thinking for "afternoon." Afternoon is afternoon, and every afternoon people come to see anybody.

Animal. Animal is animal and *tanimal*. When animals go out to walk. And when the lions go, and they take the giraffe. Here 's the lion looking for the giraffe. Here 's where the windows go to bed . . . because they wash 'em so much.

Ankle. Ankle means to walk with.

Ant. It means the ants, of course. They creep around like this, like anything,—red ant. I don't know there 's any more ant besides red ant. I guess there 's black ant, I guess.

Apple. It means to eat, just to eat.

Apple-sauce. It means to eat, 'course.

Apron. It means to wear, so you won't get your dress all dirty.

Arm. It means to work with.

Aunt. Sounds like a ant.

B

Baby. It means babies that creep,—just like this (she illustrates by creeping).

Back. Means so you can lean against.

Backbone. Why, it means your backbone (she points to hers). O, I don't know, just for the back.

Bag. It 's bag, and course for bags. And I don't want to tell you any more. For rags and tags and *tadags*.

Ball. It means balls for playing tennis or anything.

Banana. It means for eating.

Bank. For money, money, money!

Barn. It means barn, and the horses to go in.

Barrel. It means to put things in.

Basin. It means to wash your hands in, or your feet, or your face, or your legs,—no, not your legs,—or eyes.

Basket. Means to throw papers in.

Bath. It means bath, why, just bath. It means to have your bath in, don't you know, that does ?

Bead. It means stringing.

Beans. It means to eat.

Bear (Bare). I thought you meant bears. It 's bare of your little arms,—you mean bears that walk. Why, they 're bears that walk around.

Beautiful. Beautiful means beauty.

Beauty. Means beauty, nice.

Bed. It means to lie in in the night, night and every night.

Bedroom. It means where your bed is, just like ours. When the people go to sleep, why, they pull down their blinds.

Bee. Bees mean what eat the honey and steals. (she then added: "Steals means sting.")

Beef. Means to eat. My gracious, beef means to eat!

Bell. It means to holloa!

Berry. It means to eat. To see if berry 's gone bad.

Bib. When any berry goes bad you must put your bib on.

Bible. It means a book.

Bicycle. It means to ride on.

Bird. The cats kill the birds. And a bird flies.

Birthday. Well, birthday means when you have nice, pretty presents.

Biscuit. It means to eat,—dogs and people,—but, tather, Mittens (the cat) loves cheese.

40. Bit. O, it means bleed.
Bitter. Means bitter. Just bitter things. Children do not like bitter things, and they don't like bitter things.
Black. Means coald (*i. e.* coal).
Blackberry. Means to eat.
Blackbird. The blackbirds that come on Mrs. Wooten's lawn are lovely, They don't sing very nice. They love bread, and robins love worms.
45. Blanket. It means blanket to cover over you.
Blind. I've got to go and write a notice of blinds before I tell you. It means to pull down when the people are to sleep.
Blind. It means just blind. When they shut their eyes.
Block. Means blocks that they build the sidewalk with. I know what wood is for. It's to put in the fire and *tumpety tump*.
Blueberry. Blueberries mean to eat. But, didn't we pick blueberries at Bayville, though!
50. Bluebird. Well, the bluebirds go and go. I wonder if that bluebird in our shed—I wonder how he got killed in that shed down in Bayville.
Board. Board is meant to make steps with. They make houses with board. Put boards down when it is winter, to walk.
Boardinghouse. It means where you have your meals and suppers and dinners and things.
Boat. Boat is to ride in. We have two boats, a sailboat and a rowboat, and we go over to the island.
Bone. The dogs eat bones, don't you know? Why, there 's bones in *you!* There 's your cheekbone! Feel if you can't see my cheekbone! I can feel my own tooth!
55. Bonfire. It 's a bonfire that they do to burn grass, or a shoe-fire to burn shoes.
Bonnet. Why, the children wear bonnets.
Book. O, book you read. You're reading a book.
Bookcase. To put books in.
Bottle. A bottle is for babies to drink out of. And, why, the bottles have listerine and pa'fume, and powder is in a box.
60. Bouquet. Boquet means a boquet of roses.
Bow. It means just a bow that you tie on your hair.
Bowl. Why, a bowl is to drink out of, if you want.
Box. It means to put things in.
Boy. O, boys mean,—they're boys that walk, of course. The boys go in the house, and play and lie down.
65. Bread. It means to eat.
Break. It means bottle break.
Breakfast. When you're hungry, you eat breakfast in the morning.
Broom. It means to sweep the floor.
Broth. Broth means to drink.
70. Brother. Brother means a brother to you. Just my own brother.
Brush. Means to get up the dirt with.
Bubble. Bubble means you blow bubble. Now, I wish I blew bubbles so I could be a Frenchman!
Bud. It means a bud, and if it 's all out, you pick it, and, if it isn't, why you don't.
Bug. It's a bug that flies around.
75. Bureau. It means a bureau. Means when you dress you look at the mirror and you get at it.
Bush. Rosebush.

Bushel. A bushel of bundles, if it is.
Butter. It means to put on bread.
Buttercup. Buttercup means a flower.
Butterdish. Means for the butter to go on.
Button. It means button that you sew on things.
Buttonhole. What you button the buttons in.

C

Cage. Cage means to put animals in.
Cake. Cake means to eat.
Calf. Means a "bossie."
Call. Nobody calls on mama very much this rainy day.
Camel. Why, a camel means a camel, of course. You ride on camels sometimes.
Camp. Means just to camp. Camp sounds like guimpe, doesn't it, tather?
Can. Can means that tomatoes are in.
Candy. Candy means to eat.
Cane. Cane means just cane. Cane is a walking-stick, don't (corrected immediately to isn't) it?
Cap. Cap means to put on your head,—baby's capping head.
Cape. A cape means to put around you.
Car. A car means to ride on, of course.
Card. A ice card you mean, tather, or a calling card? A ice card means to put out, and a calling card means to take with you, if anybody is going out.
Carpet. It means to put down anywhere's it belongs.
Carriage. A carriage means to ride, for anybody to ride in that 's going off.
Cat. A cat means just a cat. A cat eats salmon and meat and anything else that he likes. He runs around and walks around and kills snakes and mice, and kills birds and rats.
Ceiling. Ceiling means that (she points to the ceiling of the room).
Celery. Celery means to eat.
Cellar. It means to take down papers and put papers in the waste-basket down there.
Cent. Cent means a cent, any cent in the dollar.
Chain. A chain means a dandelion chain.
Chair. Chair means to sit in.
Chalk. It means to write with on the black.
Cheek. Cheek means to kiss on.
Cherry. Cherry means to eat, to cherry *muzzums*.
Chicken. Means a little chickie. They eat . . .
Child. Means a little girl.
Chin. It means to kiss, chins.
Chip. Chip means a chip. Didn't we go to the chip-house (*i. e.* ship-carpenter's shop) at Bayville, to pick chips. It feels as if it were a very piece of curled up wood.
Chocolate. Plain or sweet? Sweet chocolate means to eat. Plain chocolate 's to eat, too.
Christmas. O, sweet dollies is Christmas, and the Christmas trees! It means the Christmas Sunday. Because it 's winter.
Church. Means to go in on Sunday.
Circus. O, I 'm going to the circus this morning. It 's just animals.
Clock. It 's to set time.
Closet. It means to bring old things, to put old things in.

Cloth. Means to make things with.
Clothes. Means to wash whenever they're dirt, whenever you see a speck of dirt.
Clothes-line. It means to hang 'em in.
Clothes-pin. Means to keep the clotheses on the line.
Cloud. You mean the rain-cloud? It makes the sun come out.
Clover. I'll go and get one, and then I'll tell you. It means something like this (she points to the letter M). It's just a flower.
Coal Coal means to put in fire.
Coat. A coat means you wear in winter.
Cocoanut. Cocoanut means to eat cocoanut candy.
Cold. Means when you catch cold, 'course.
Coffee. Coffee means to drink.
Coffee-pot. Means to put the coffee in.
Collar. It means to wear on your neck.
Color. It means a colored shirt.
Company. It means when people call, whenever you have anybody.
Cook. A cook means just a cook.
Cookbook. It tells what to cook.
Cookie. It means to eat. Dogs eat some, and people eat some. Jackie (a dog) ate crackers when he was here.
Cork. Peaches'll come soon. It means to put over the peaches.
Corn. It's just to eat.
Corner. A corner for the girls to play in.
Cow. A cow says *moo-oo-oo!*
Cracker. Means to eat. Jackie ate crackers.
Cradle. Cradle to put babies in.
Cream. Cream means to put in coffee, or tea, and things.
Crib. Means for anybody to get in that's small enough.
Crumb. It scattles up things. It comes from the bread.
Crust. It means a crust of a crust.
Cup. Cup to put your coffee in.
Curls. It means these (she points to her own curls).
Curtain. It means to pull over the window.
Cushion. It means to stick pins in.

D

Daisy. A daisy flower, a daisy dollie.
Damper. I'm trying to think what it is. . . . To open, when you light the fire.
Dandelion. When the good dandelions were here, I used to pick a great big bunch. It's a flower. Besides, a dandelion stew.
Darling. I'm darling.
Daughter. I'm daughter.
Dead. Dead means a bird's dead. Besides, cats kill birds, and cats kill mouse.
Deer. O, the deer down at Elm Park. Want to see those deer before that one grows big. Tather, do you know that one of the baby deers died?
Depot. When you wait where the trains come in, you get on it. Where you take the train.
Dessert. Dessert pudding? Dessert is to eat on Sundays.
Dictionary. That's what you're making. Do other tathers want to make a dictionary of their little girls?
Didy. It means to wear, little babies, to wear on her bottom.

Dimple. Here's my dimple (she points to her chin, where she has one).
Diningroom. Means having your breakfast and supper and dinner in.
Dinner. You eat dinner in the afternoon.
Dirt. Means to dig in, just the same as down in the yard. I wonder why he wanted to know what dirt is?
Dish. Why it means to put things in, candy, anything you want.
Dishes. Just to wash.
Dishpan. Means to wash the dishes in.
Doctor. Doctor means a lady (her physician is one). They give medicine to people. Doctor means a man. Doctors like father, they write, write, read, read, write.
Dog. A dog means a dog. A-H-Y-C-H-T, that's the way I spell dog. It means to walk around and eat. Dogs chase cats.
Doll. It means to play with.
Dollar. If I had sixty dollars, I'd pay for a bed. If I got one, I'd pay for it with all my money, and pay for the rent.
Dominos. They're blocks; you build anything you want.
Donkey. O, the cunning little donk'! It means to ride on, the poor little things.
Door. It means to go in.
Doorknob. To open the door if it isn't locked.
Dough. Just dough made out of bread. You make little breads out of it, and piecrust.
Dove. *Pidj, pidj, pidj* (she calls a pigeon)! If I caught one of those pigeons, that was a pigeon.
Drawer. Means to put things in.
Drawers. They're to wear on your legs.
Dress. Means to wear.
Dressmaker. Means to make dresses.
Drink. To drink water. I'd like a drink, mama!
Duck. There was a hundred of ducks at Elm Park, you never saw! It swims in the water. They wigged their little hand like this (imitating), and they dipped their heads down in the water as soon as they got some crackers.
Dust. Dust you sweep up where you find it.
Dustpan. It means to put dust in.

E

Ear. Ear means to hear with when you aren't deaf.
Egg. Egg means to eat, and what chickens come out of.
Elbow. This is elbow (she points to her own). To stretchen your arm with, and to do it up like this (bends her arm). If you didn't have elbow, you couldn't do your arm up like this.
Elephant. This is an elephant (she points to her toy elephant).
End. Here's end (she points to the end of the sofa). It's the end of a couch, end of the bed, of table.
Envelope. To put letters in.
Evening. Evening comes before night.
Eye. To see with.
Eyelid. For your eyes to live in.

F

Face. To wash your face. For eyes to be on.
Fan. To fan yourself with.

Fat. Means a fat man and fat womans.
Father. Means a tather. To take care of little girls when their mother is gone out.
Feather. Here 's a feather (she points to one).
Feed. Feed the children.
Fence. Is to keep little children from going over the fence into the next yard.
Fern. These are ferns, these are feather ferns (she points to a little feather duster in her hands), you pick 'em.
Fingers. You put 'em on your hand. They're to carry things in; to put gloves on.
Finger-nails. To dirty 'em with.
Fire. Fire on the street or in the house? To keep you warm in winters.
Fish. Just fishes to eat. They live in the water and get drinks under there.
Flag. It means to shake-a-day to people.
Floor. Means to walk on and keep you from falling down under the house.
Flour. Why, you make bread of it.
Flower. They mean to smell of, that 's all.
Fly. To catch for the lizard. Lizard loves flies, don't you know? Don't you know England flies are green?
Folks. They're my own folks.
Food. Food means for babies to eat.
Foot. To walk with.
Forehead. Just the forehead of the face.
Fork. To lift up your dinner with.
Friend. Just a friend of yourself. A friend does anything she has to.
Frog. Toad you mean. Frogs live in water. They live under the porch.
Front. Front porch?
Frost. Frost of the windows. Frosting on cakes.
Frosting. Frosting on cakes.
Fruit. Fruit means to eat.
Fun. The children play fun. Each children play fun.
Fur. To go around your neck.
Garden. Garden is to plant.
Garter. To garter up your stockings.
Gate. To go in.
Gentleman. He 's a gentamul. Ladies and gentamul.
Geranium. A flower.
Gingham. Cloth.
Girl. Why, girl means to go to school.
Glass. Out of drink,— to drink out of.
Glasses. Just so you can see.
Glove. To put on your hands to keep it warm.
Goose. It swims on the water, goose does.
Gooseberry. To eat.
Grandma. Your own grandma.
Grandfather. Just the same, the tather.
Grape. Grape means to eat. I never had some grapes.
Grass. Grass means to give the horsie. And to give the cow.
Gravy. It 's on meat.
Griddle-cake. We had some. Means to eat.
Grocery. Your grocery-man brings home things that you want for supper.

Ground. Means people's lawn. Means the Nuwersity lawn, too.
Gum. Gum means to eat.
Gun. Means to shoot people.

H

Hail. Sometimes when it rains it hails. I don't believe what hail is.
Hair. Hair of the horse? Anybody's? That's on top of your head.
Hair-pin. To press in ladies' hair. When they bunch their hair up, why they press 'em in their hair.
Half. One of these is half (she points to a piece of paper torn in two).
Ham. To eat.
Hammer. To build a house with.
Hammock. To swing in.
Hand. To work with.
Handful. Means to carry handful.
Handkerchief. To blow your nose with.
Handle. That's what you take hold of.
Harness. For the horses. You put it on and hang it up.
Hat. To wear on your head.
Hatchet. To pound wood.
Hat-pin. Means to put in your hat.
Hay. It means to give the horsie.
Head. To have your eyes on.
Heel. Heel of the shoe,— to walk with.
Hen. Children's hen. It means hens that eat. They pick and they lay eggs.
Hill. Means to climb up. I could slide down hill.
Hoe. Means just to hoe with. You just hoe up everything.
Holder. To hold your irons.
Home. It's somebody for you, that's it.
Honey. The bees make honey. People eat honey, don't they?
Hood. To wear in the winter, as you call it.
Hook. To hang up things.
Hop. Hopscotch.
Hopscotch. That's hopscotch (she imitates). You stand up and put your foot like this, and put your foot down and around and then skip.
Horse. To ride on *backety-dack*.
Husband. Means to take care of you every time you go out. He stays home and works.

I

Ice. It means to skate on in winter. They dig up and then they put it in ice-wagons. They clean it off and get the dirty stuff off, and then they put it in ice-wagons and give it to peoples.
Ice-man. That takes the ice up.
Ink. It means to write with a pen, I tell you.
Iron. Means to iron with. Don't you mean irons with handles?

J

Jackstones. You throw 'em up in the air, and, when one of 'em's up, you throw the other up on the back of your hand.
Jam. Means to eat.
Jar. For cream to go in.

Jelly. Means to eat.
Jug. Means to put jelly in, jug.

K

Key. To unlock the door with.
Keyhole. To put the key in. I tell you what 's a good word, *jum-aty-jum*.
Kindergarten. It means for children to go in.
Kitchen. It means to work in, ladies and things like that.
Kitten. Kitten eats milk. A kitten is a baby cat.
Knee. Means your knee. If you have a knee you can sit down with it.
Knife. To cut with.
Knot. Why, just a knot. It means a knot, when you knot your petticoat.

L

Lace. Lace means just lace. Anything what you put around collars and things. You keep it and put it in boxes.
Lady. Means to walk, to get dinner and things.
Lake. Means a pond.
Lamb. Means to eat. A lamb walks around and it 's a sheep. I call 'em sheeps. I think once I saw a little bit of a baby sheep.
Lamp. It means to make a light with.
Lap. When you have a little girl, and she wants to sit down in her mother's lap, why, you let her.
Leaf. It 's the laces of trees.
Leg. To walk with. To *dut* with.
Leggings. You wear in the winter.
Lemon. It 's to make lemonade in.
Lemonade. Means to drink.
Lesson. Girls write lessons.
Letter. Means a little girl's writing.
Lettuce. To eat.
Lily. A flower.
Lion. In the circus. He 's in the cage so he can't get out.
Lips. There your mouth is.
Loaf. Why, a loaf 's to eat,—of bread.
Locket. It 's a locket to wear on your neck.
Log. It goes in the water, right across.
Looking-glass. Alice walked through the looking-glass, walked right through it.
Lot. A lot of eggs.
Lounge. To lie on.
Lunch. It means to eat.

M

Macaroni. Roll it up in *takatoni*. To eat. It looks like sticks that come off a tree.
Machine. To sew with. You mean a sewing-machine.
Mama. To take care of you. To work. Love me, of course.
Man. When a mother is gone, to take care of you.
Marble. To roll. I want to have my own marble.
Marmalade. To eat. It 's made of orange.
Mat. To put down on the ground.
Match. To match the light. To make the light with.
Meal. To eat.
Melon. To eat.

Milk. To drink. It comes from cows.
Milk-bottle. That 's the milk 's in.
Milk-man. Brings the milk.
Mill. A wind-mill? To make the water. To help the pond and get the water out.
Minute. Get up a minute.
Mischief. Just mitschief.
Mittens. Means a puss. It means a cat too (a cat she knows is named M.).
Mittens. To put on your hands, 'cause in the winter your hands are cold in the outside.
Moccasin. To put on your feet,—little Indians.
Money. To pay things with.
Moon. Moon is in the sky in the night. It's out of the sky in. It looks at the children go to bed, then it goes in its own sky.
Mop. To mop up the house,—clean up the floor with mops.
Morning. Morning light and morning day.
Mosquito. Mosquitoes bite.
Moth. A moth to eat the clo'se.
Mother. To take care of you, and work and iron.
Mountain. To climb up hills, and a hill is a mountain.
Mouse. The mouses sometimes get in the house, in the wall.
Mouth. To take your dinner in and things.
Mouthful. Just a mouthful. Means a mouthful o' bread.
Mr. Means the father (*i. e.*, husband) of Mrs.
Mrs. It means the wife of Mr.
Mud. It means, when it rains, why, there 's mud in the road.
Mud-puddle. It means, the mud makes mud-puddles when it rains.
Muffin. To eat.
Mug. I call it cup.
Music. Just *meyowsick*. To play on the piano.
Mutton. To eat.

N

Nail. To hammer down in.
Nap. To take when you 're tired.
Napkin. To put on you at the dinner table.
Napkin-ring. To put away your napkin, to put over your napkin.
Name. Means your name, Ruth.
Neck. Your neck that your head is on.
Necktie. To wear on your collar.
Needle. To sew things with.
Neighbor. Means a home, a bear's home (she had heard some fairy-tales).
Nest. Birdies to sleep in.
Newspaper. To look at.
Night. When you go to bed.
Night-dress. To wear when you go to bed.
(Nightie.)
Night-gown. To wear when you go to bed, for a lady; and then, for the children, nighties.
Noise. It means hammer.
Nose. To sneeze with.
Nut. Means to eat.

O

Oak. It means nothing but a piece of tree.

Oat-meal. To eat.
Office. To post your letters in.
Oil. To put in lamps and things.
Oil-can. To put oil in.
Oil-stove. To put oil in.
Orange. To eat.
Organ. It means a church (*i. e.*, it's in a church).
Oven. To put things in to cook.
Overcoat. To wear when it's winter.
Overshoe. To put on your *routie-trouties*. To put on your first foot. To wear in the winter.
Oyster. To eat. Just peel the shells off.

P

Page. To write on.
Pail. To carry things in.
Pain. Just a pain as S. usewill (*i. e.*, usually) has.
Pan. To cook things in. Dish-pan.
Pansy. To pick. It means a flower. Don't *timbals* me any more.
Pantry. It means to put things in.
Papa. To take care of you.
Paper. To write on.
Paper-knife. To cut with.
Parasol. To keep the shade out of your eyes, when you have n't got any hat, when it's sunny.
Park. It means where ducks are (she saw the ducks at Elm Park, Worcester).
Parlor. It means a hall. Where you come in you go into a hall.
Party. Why it means when you have anybody to come, and then you go to it if anybody asks you to.
Pasture. Where the cows are. I should n't wonder whether there are any blueberries down in the pasture. I don't want to do any more, tather, 'cause I've got to go to the Sunday School.
Path. To walk through.
Pattern. It means to make dresses with.
Peach. To eat, just plain.
Peanut. To eat, just plain and salted.
Pear. To eat, just plain.
Peas. To eat with cream, if you want, and, if you don't want it, without.
Pen. To write with.
Pencil. It means to write with.
Penny. It means to pay things with.
People. It means the people that eat things.
Pepper. It means to put on things. It is n't like salt; it's something like black dirt.
Peppermint. Peppermint means to eat. It's something like white sand.
Person. It means a man.
Petticoat. It's to wear on you, under your clothes.
Photograph. It means a camera.
Piazza. It means to sit out under.
Picnic. When you go out to have a picnic, why you have one.
Piano. It's to play on, to practice with.
Picture. It means a picture of me.
Pie. To eat, with frosting.

Piece. It's a piece of paper.
Pig. It's a crying pig. Means a *ollish*. It means a animal or anything.
Pillow. To lie on.
Pills. To take, because you have to, when you've got a headache.
Pin. To put in your dress.
Pin-chshion. To put pins in.
Pipe. To blow with, bubbles.
Pitcher. That's to have water in.
Place. To lie in.
Plaster. To put on your finger when it's sore.
Plate. To put things on, your meat.
Plaything. To play with.
Plum. To eat, just plain.
Pocket. It means to put things in, right in here (pointing to her pocket).
Pocket-book. It means to put money in and take it out of.
Poem. It means to write with—it means a book.
Poker. To poke the fire with.
Polish. To polish boots with, black boots, and white boots and brown boots.
Pond-lily. Is a flower.
Post-office. It means to post, to put letters in.
Porch. It means to sit on, outside.
Potato. To eat, with gravy and cream and butter.
Present. You get Christmas presents on Christmas.
Pudding. It means to eat,—just the way it is.
Pumpkin. It means to eat.
Pump. To get water out of.
Puppy. Means a little puppy-dog.

Q

Question. To ask.
Quilt. Means when it's winter you cover it over you.

R

Rabbit. Means an animal, just a real animal.
Rag. To put in the bag. It comes from a piece of cloth.
Rag-bag. To put rags in.
Railing. On a porch.
Railroad. It's for a track to run on. For trains to run on.
Rain. It means pouring. It comes out of the sky.
Rainbow. When it rains you see a rainbow.
Rake. To rake up the ground with.
Raspberry. Means to eat. I should n't wonder whether we would find any blueberries down in the pasture. I wonder whether we would find some raspberries there.
Rat. Means a rat that gets in people's houses. It eats things that everybody has got in their houses.
Rattle. Means for babies to play with.
Register. Means where the heat comes up, of course.
Rein. It's to play horse with.
Rest. This (she was resting in her mother's arms).
Rheumatism. I think it's sick.
Ribbon. To wear (pats her head).
Rice. To eat. It's a cereal. I want some cereal.
Ride. To go ride in a four-legged cart.

Ring. This (making a ring with her arm). Children take hold of each other's hand and make a ring.
River. Means where you get drinks out of, water, and catch fish and throw stones in.
Road. To ride in in a wagon.
Roast. Means if you roast chickens.
Robin. Means a bird,—red—red, brown—brown.
Rocking-chair. It means to rock in.
Roof. It's me (she misheard the word, and thought it was *Ruth*). It means the top of the house.
Room. Bedroom, where beds are. Sitting-room.
Rooster. It means to take care of the little chicks, and lay eggs.
Rose. Means a smelling. It's a flower.
Row. Means to row in a boat (*i. e.*, the oar).
Rubber. To wear on your feet when it's wet. To rub the writing with, if you write it wrong.
Rubbers. Means to put on your feet.
Rug. Means to put down on the floor.

S

Sacque. To wear.
Salt. To put in the sea-shore, in the watér; to put on anything you want to.
Sand. Means to play in.
Satchel. Means to put clothes in.
Saucer. It means to eat out of.
Scarf. To wear.
School. To go in—for anybody that wants to.
School-house. What the school is.
Scissors. To cut with.
Seat. To sit in.
Seed. To plant in the garden.
Self. It means me.
Shade. It means where you sit under.
Shadow. When you're walking around on sunny days, why you see a shadow of yourself.
Shawl. It means to wear around you, like this (she had on a shawl).
Shears. To cut with.
Sheep. It means a animal.
Sheet. To wear over you when you go to bed.
Shelf. To put things on.
Shell. You find 'em in the water. They're to keep or to do anything you want to with.
Ship. To ride in on the water.
Shirt. To wear.
Shoe. To wear on your foot.
Shower. When it rains, it's a shower.
Side. 'T means sittin' on side of anybody.
Sidewalk. It means to walk on,—down town and places like that.
Sieve. It's to sieve things with.
Silk. If you want to have a dress out of it, why you do.
Sister. It means a lady.
Skin. It's on you.
Skirt. To wear right here (pointing).
Sky. It means up in the ceiling. Away up only but 'cept out there (pointing outside).

Sled. To ride on in winter. I wish it were winter now, so I could ride on mine.
Sleep. It means when you are tired, why you go to sleep.
Sleeve. Means a sleeve on your dress, of course. It 's to keep your arms warm.
Slipper. To wear on your foot in the morning when you get up.
Smoke. Out of the Nuwersity (*i. e.*, University). It comes out of Nuwersities, houses, and pipes.
Snow. It means when it 's winter it 's snowy.
Snow-ball. You frow your snowball.
Soap. To wash your hands with.
Sofa. To lie on.
Sofa-pillow. To put your head on.
Son (misunderstood as *sun*). It 's up in the sky to make the day sunny.
Song. When you play on the piano, why you sing.
Soup. To eat, and make and eat.
Spool. Covered of fread.
Spoon. Well, it means to eat with.
Spot. Grease spot.
Spoonful. To put in your mouth.
Spoon-holder. It means to put spoons in.
Spread. To put on the bed.
Squash. To eat. Squash pie.
Squirrel. It means a rat. It is a animal. You see squirrels sometimes on the ground and sometimes on branches of trees.
Stairs. To walk up.
Steak. Then eat it, beefsteak.
Steeple. Steeple of the church, on top.
Steps. To walk up.
Stick. For a walking-stick an' trees.
Stocking. Means to wear on your foot and on your leg.
Stomach. Well, to eat things with.
Stone. It means stones that are on the ground. You throw 'em and the dogs go and pick 'em up with their mouthies.
Stool. To sit on.
Store. To buy things.
Storm. It means when it rains it 's a stormy.
Story. Means to tell about.
Stove. To cook things on.
Strap. To put around things.
Straw. Means a straw hat to wear on your head.
Strawberry. To eat. You go out and pick 'em in the fields.
Street. Means to walk on, people.
String. To tie things with.
Sugar. To eat in your coffee, and on bananas, too.
Sugar-bowl. To put sugar.
Summer. When the daisies grow. When every other thing grows.
Suit. Then, to wear.
Sun. In the summer the sun comes out.
Sunday. When you go to church. Work, if you want to; get the dinner, if you have to.
Sunday-school. To go in in the church. I 've never been.
Sunset. It means up in the sky is the sun in the night. He goes up in the sky an' downstairs.
Supper. You eat supper in the night.
Swan. It means a duck, as I call 'em.
Swing. You mean swing in the hammock.
Syrup. To eat.

T

Table. To put things on.
Table-cloth. To put on the table.
Tack. To pound in the floor an' make rugs stay (here she stamps) down.
Tail. A tail of a animal.
Tea. To drink in the night at supper.
Teacher. It means teach people, then. To teach the children at school.
Tea-kettle. That water 's in.
Teapot. That the tea is in.
Teaspoon. To eat your tea with.
Tear. When your dress tears.
Tears. When you cry, it 's tears.
Teeth. It means your teeth that you chew with.
Tent. That Indi'ns are in.
Thanks. When you give me anything, why I say "Thank you."
Thanksgiving. When you have chicken (*i.e.*, turkey) and desert.
Thimble. To wear on your finger when you 're sewing.
Things. Playthings, real things. O, I wish I had real Betty (her doll) up here!
Thread. To sew with.
Throat. To chew with. Then it means to go down things with, —everything you eat.
Thumb. Means a finger. Thumb-finger.
Thunder. When it 's a thunderstorm it thunders. It comes out of the sky. It be's thunder showers then.
Ticket. Means a ticket for a car, for a train. Ticket to go to a party.
Tiger. Means animal, a circus animal,—black and yellow.
Time. Means four o'clock.
Toad. Means a little toad that live under the porch.
Toast. To eat. It 's a piece of bread. They just brown it.
Toes. Means part of your feet.
Tomato. To eat. It grows in the gardens.
Tongue. The tongue 's in your mouth. To help you chew.
Tooth-brush. To brush your little toothies with.
Tooth-pick. To pick your tooth with.
Top. Top what? Top of your head, top of a door, top of your table.
Top. You spin it.
Towel. To wipe you with.
Town. It means to go in.
Toy. It means Santa Claus bring you a toy.
Tree. To sit under, if it 's shady.
Trouble. It 's too much trouble to do that.
Trousers. Means to wear for men and boys.
Trunk. That you pack things in.
Tub. To wash things in.
Tumbler. To put water in and everything.
Turnover. Things to eat. They 're like bread.

U

Umbrella. To keep the rain off you.
Uncle. Means to take care of you when your father 's away.

V

Veil. To wear on your face.

Vest. To wear on fathers.
Vine. Means grape-vine.
Violet. Means a little flower. It 's blue and some white.
Visitor. It means your caller.

W

Wagon. It means to ride in.
Waist. To wear. A shirt-waist. A under-waist.
Wall. It means to jump over. Fences are made of woods. Walls of the house.
Wash-board. It 's a wash-board to put clothes on and soap, and then scrub them with water.
Wash-bowl. That they wash the clothes in. It 's to wash your hands in.
Wash-rag. It means to scrub the floor with
Wash-stand. To put tubs on.
Wash-woman. It means that washes your clothes.
Waste. Waste paper.
Watch. To tell time.
Water. To wash things with. And keeps it in the tap. And you drink it.
Water-melon. To eat, and put on ice.
Week (last). The other day.
Weight. You just lift yourself up by the back of your dress (*i. e.*, in getting on scales).
West. The wind comes from the west sometimes.
Wheel. It means on a wagon.
Whip. To whip the poor old horsie.
Whiskers. It means the whiskers of a man,—right here and there (pointing).
Whistle. To whistle with—, *pew-wew* (imitating).
Whole. You say, "I want the whole of it."
Wife. Means your own wife, that takes care of you.
Wind. Why, it blows the shutters shut when anything is windy. It comes from east.
Window. It means that you open. You shut 'em and open 'em.
Wing. It means the wing of a bird.
Wire. It means a telegraph wire. Either (*i. e.*, or) car-wire.
Wolf. It means a animal.
Woman. It means a lady.
Wood. It means to put in the fire.
Wood-box. To put the wood in, that you get it in.
Wood-pile. Means a pile of wood.
Woods. It means that you go in.
Wool. Means to put over you when it 's cold.
Word. It means that you ask.
Work. It means this that tather's doing just now.
World. Means that you go in.
Wrapper. To put around you.
Wrist. It means this part (pointing) of your hand.

Y

Yard. It means to play in.
Year. It means four years.
Yoke. To wear on your neck.
Yolk. It's the yellow of a egg.

Z

Zinc. It means to keep the floor from being black.

II

A

Ache. Means a stummy-ache.
Act. Means a naughty, naughty girl (in reference to the rebuke "Don't act so").
Ask. It means to ask questions.

B

Bake. It means when you bake, why, you cook.
Bark. It means dogs bark.
Begin. To begin with the end of a book.
Bite. People bite you, I mean mosquitoes.
Bleed. It means when you hurt yourself, why, you bleed.
Blow. To blow bubbles. Wind blows curtains and blinds and babies and everything.
Borrow. It means when you borrow anything from people.
Bother. No bother!
Braid. Means a braid back of your head.
Break. It means when you break your bones, dishes, anything else that you can break ez'ly.
Bring. It means to bring things.
Brush. To brush your hats and your hair and everything.
Build. It means you build a house. Yes, sir, if you please, I'd like to build a house for you very quick!
Bump. It means when you bump your head, why, you cry.
Burn. When you burn yourself, why, you cry. Sometimes you burn your fingers and sometimes your burn your dinner.
Buy. It means when you buy things to eat.

C

Call. When you call on people, why they're home. Other people come and call on you sometimes.
Can. When you go fishing you take a can full of worms.
Care. You take care of children.
Carry. To carry things in your arms.
Catch. When you catch balls and things.
Change. Change your clothes.
Chew. What you chewing? Means when you chew things.
Choke. When you hold your neck so tight that you choke.
Clap. When everybody claps, why, you clap. You clap with your hands.
Comb. To comb your hair.
Come. It means children come when their mother calls them.
Cook. When you cook you eat.
Cool. Means cool winter days.
Cough. When you cough you hold your neck.
Could. I could. I could play anything.
Count. Means when you count three dollars, you count four, one, two, three, four, five. One, two, three, five, eight, twelve.
Cover. To cover people with clothes. To cover up a box.
Crack. To crack in two.
Crawl. Once a snake got on our porch. I guess he crawled up there.
Creep. A little baby creeps; don't she?
Croquet. It means to play a game.

Cry. When you hurt yourself, why, you cry, your eyes all squeezed up and tears rolling down.
Curl. Means your hair is curled.
Cut. To cut paper, then.

D

Dance. When you dance, why, you 're dancing and playing and running, and things like that.
Don't. Don't do it!
Draw. To draw pictures.
Drive. When horses run, they drive.
Drop. You drop things and break 'em.
Drown. When people get drowned, why they 're pulled out.

E

Eat. To eat things.
Enjoy. It means that you have a good time.
Excuse. Excuse me from the table.

F

Fall. When you fall, why, you hurt yourself, and then your mother comes after you.
Fasten. When you fasten hooks and safety-pins.
Feed. It means when you feed children.
Feel. You feel things biting you.
Fight. When dogs fight.
Fill. When you fill bottles.
Find. It means find things out.
Fine. When you go to buy things, you buy something fine in a store.
Fit. When you have a fit. I had a play-fit.
Fix. Means just fix up things.
Fly. You have to have wings.
Fold. When you fold cloth and dresses, when you put 'em in a trunk.
Follow. When you follow people you take hold of their hands.
Fool. When you fool people. I was just fooling a few miuutes ago. I was fooling that I was pounding.
Forget. When you forget, you think and think all day long.
Freeze. When you freeze ice-cream. Water freezes.
Frightened. When you 're frightened, why you cry then.
Fuss. It means just fussy.

G

Get. To get things from the store.
Give. To give people something.
Go. When you go anywhere.
Grow. Grass grows, and things in the garden.
Grown. When I get to be a big girl.
Guess. I guess so.

H

Hang. When you hang clothes out.
Hear. You hear with your ears.
Hide. Why, you hide when you want to play something.
Hit. When you hit people, why, they cry.
Hitch. Hitch horses and dogs.

Hold. To hold things with your hands.
Hop. Hop-toads. Hop-scotch.
Hug. To hug people.
Hurry. Why you have to hurry, just walk fast.
Hurt. When you hurt yourself, why, you cry.
Hush. When you want babies to hush, why, that means for 'em to go to sleep.

I

Is. Anything is.

K

Keep. When you keep house.
Kick. When you kick you just put up your legs like this (kicking).
Kiss. When you kiss people (kisses her mother).
Kneel. Kneel down to get a piece of cloth on the floor (kneeling).
Knit. When you knit things (making motions with her fingers) with knitting-needle and knitting-cloth.
Knock. When you knock on the door.
Know. "I know that," that's what you say.

L

Laugh. *Ha-ha!* (laughing).
Learn. When you learn. I learn lots of things. I learn how to say "chicken-pie."
Leave. Leave things in the house.
Left. When you left the house.
Let. When you let the little girl go out to the store, if she's big enough.
Lie. When you lie down on the couch.
Lighten. When you lighten a light.
Listen. You listen to the minister.
Live. Everybody does live in a house.
Lock. You lock doors.
Look. You look at the sky when it's pretty. O, my sky has gone blue!
Lose. You lose things, a penny or anything.
Love. I love everybody I know. I love mama the most, and Betty, my doll. I love father.

M

You make cake and rolls and things, and bread. Father makes lemonade. I make things in the play-house.
Mark. You mark with a pencil on a paper.
Mash. Mash potatoes.
May. May I go out to play?
Mean. Meaning-book. It means when you mean it.
Meet. When it's people that you know, why, you meet 'em sometimes.
Mend. When you mend stockings.
Mew. When the cat says *mew-ew!*
Might. You might do things.
Mind. When you mind your mother.
Mix. When you mix, why, you have to make cakes, you mix flour and butter and cream and sugar.

Move. When you move things, chairs and trunks and beds.
Must. You must do things.

N

Need. When I need something. I need to wash.

P

Paint. When you paint houses and other things.
Pat. When you pat dogs, right with your hands.
Pet. A pet dog. You have to have a pet dog.
Pick. When you go out picking berries.
Pile. When you pile things. A pile of sand or a pile of sawdust.
Pinch. When you pinch yourself in a door.
Play. When you play house, tea party, other games,— I couldn't tell you what.
Poke. When you poke people, why they cry. When you poke 'em you poke 'em with umbrella of course.
Pound. When you pound nails and things with a hammer.
Pour. When you pour water in glasses. You said you were going to pour these out to-morrow.
Prick. When you prick yourself with a needle, why you cry.
Pull. When you pull people like I do you. With your arms.
Push. You push things with you back and sometimes with your head and sometimes with your stomach.
Put. When you put things in any where.

Q

Quack. A duck says "quack!"

R

Race. Race across the road.
Raise. I don't know what e'zac'ly.
Reach. When you reach things on the table.
Read. When you read picture-books.
Remember. I remember things that I told long ago.
Roar. That 's what I said once for oaring, for rowing. (She understood apparently, *rower*). When you holler it means roaring.
Rock. It means a rock in the ground. Rock in a chair. Rock-a-baby.
Roll. When you roll over in the ground.
Rub. Rubbing noses an' hannies. To rub out things that you write wrong.
Run. Run, boys, run boys,— pussy in the pot.

S

Say. I say so. What does that say?
Scare. When you 're scared of kittens. Little girls are always scared of kittens. I'm not, am I?
Scold. When you 're scolded when you 're naughty.
Scrape. I like to scrape off sand off the shelves we have in the playhouse.
Scratch. When you scratch yourself by a kitten. With a knife, too.
Scrub. When you scrub like this (going through the motions of washing her face and hands).

See. I can see you see with eyes.
Seem. Seam in a dress (understood *seam* for *seem*).
Sell. When you sell people things.
Send. When you send bundles in the country, anywhere you 're going.
Set. To set things down.
Sew. To sew with needles. To make dresses.
Shake. When you shake branches of trees to see if there 's any ripe apples.
Sharpen. When you sharpen knives.
Shave. When you shave yourself like this (making motions on face),—not tather, but Mr. W.
Shine. When the sun shines.
Should. I should go out.
Shove. Shove the door open.
Show. Means to show things at the show.
Shut. When you shut people up, when you 're naughty.
Sift. When you sift sand.
Sing. Sing a song under the bamboo tree. I taught it (*i. e.*, "Under the bamboo tree," which she caught up from somebody) to myself.
Sink. When you sink stones in the river.
Sit. When you sit down.
Skate. When you skate on the ice in the winter under the bamboo.
Slam. When you slam the door.
Slap. This (slapping her face with her hand).
Slide. When you slide down the hill on the sled and on the winter bank.
Slip. When you slip off of things.
Smell. When you smell things. O, I smell something awfully sweet like a mouse.
Smile. When you 're good, you smile (she smiles).
Sneeze. *Ke-tchoo!*
Soil. It means when you soil things. When you soil your best mittens.
Spatter. When you spatter water and other things.
Speak. It means when you say, "How do you do?"
Spill. When you spill things. You spill 'em out of the top.
Split. When you split pieces of wood.
Squeak. Balls squeak.
Squeal. When you *squee-ay-yep!* (She squeals.)
Stand. When you stand up. (Gets up from the floor where she was sitting.)
Stay. When a little girl wants everybody to stay in her house.
Steal. When burglars steal things.
Step. When you step upstairs.
Sting. When you get stinged by a bumble-bee.
Stir. When you stir in the mixing bowl.
Stop. Stop it, my dear!
Stretch. When you stretch yourself when you 're lying in bed in the morning.
Study. Read and write, and read and write.
Suppose. I think so, I suppose.
Swallow. Put things in your mouth and just let 'em go down your throat.
Sweat. When you 're sweaty, you wash yourself.
Sweep. When the house is dirty, why you have to sweep.

Swell. Your legs swell.
Swim. When you swim in the water. (She illustrates it on the floor.)
Swing. When you swing in the hammock.

T

Take. When you take things like this. (She takes up a hat.)
Talk. When you talk, "How do you do?"
Taste. When you taste things that you eat and that you like.
Teach. When you teach little girls to say things that they don't know.
Tear. When you tear things that you're making,—paper and cloth.
Tease. When you tease your mother for anything.
Tell. When you tell stories.
Thank. Thanks. Thank you.
Think. When you think like this. (Puts her head on one side and "looks wise.")
Throw. When you throw away things (she throws something) just balls.
Tick. Dickery-dock! the clock went up the mouse. The clock ticks.
Tickle. When you tickle yourself. Mama tickles me on my back.
Tie. When you tie things with ribbons, with string.
Tip. Glasses tip right over.
Touch. When you touch things with your hand.
Treat. When you treat poor little kittens. (Her mother had said some time previously, "Don't treat the poor cat so.")
Trip. When you trip, you tip right over. You fall.
Trot. When you trot. (Gives illustration.)
Tumble. When you tumble. (Gives illustration.) I tumble sometimes and stumble.
Turn. When you turn a somersault.

U

Unbutton. When you unbutton dresses, if you please.
Understand. I understand, yes, I do, questions.
Undress. I undress myself in the night and when the sky is bright.
Unlock. When you unlock doors with a key.
Use. When you use things with your hands.

V

Visit. When you visit people, just go in their homes.

W

Wait. When you wait in the kitchen till your mother comes out.
Wake. When you wake in the morning. Jes' open your eyes.
Walk. When you walk, why you stand, and I'll show you. This is the way you walk. (She walks.)
Want. I want it. Please give it me. When you've got it, you say, "Thank you!"
Was. I was a Englishman.
Wash. When you wash cloths, cloths, cloths, half-a-day, and half-a-day, and half-a-night and half-a-day.

Wear. When you wear clothes.
Welcome. I'm welcome.
Went. I went down in the play house and found nobody there.
Whisper. (Goes to her mother and whispers in her ear.)
Will. I will do it.
Wind. Wind up thread.
Wink. Just wink with ye' eyes. (She winks.)
Wipe. Wipe things—dishes and your hands.
Wish. I wish I could go out under the winter-cloud.
Wonder. I wonder what I'm going to do next winter. I'm going to build houses and snow-cakes.
Won't. I won't do it, that's all. It's a naughty word.
Would. I would do it. I will do it like a good girl.
Write. When you write with a pencil and a pen and a piece of paper.

Y

Yawn. When you're sleepy, why, you yawn. Mama, I'm sorry I'm tired.

III

A

Afraid. I am afraid of thunder, afraid he'll kill me.
Alike. Those little twins, they're just alike.
All. All the people.
Alone. When you're alone, it's lonesome.
Another. Another people and another dog.
Any. There's not any.
Ashamed. I'm ashamed that the little chicken got killed. When you're ashamed you're sorry.
Asleep. When you're tired, why you go to sleep.
Astonished. I'm astonished!
Awake. When you wake up.

B

Bad. Means bad apple and bad pears, lemons and other things. You throw them away.
Barefoot. Means barefooted. (Sticks out her own bare foot.) When you have no sandals your feet'll be barefoot, your feet'll be bare.
Beautiful. Means a beautiful voice.
Best. It means your best dresses. Mama, you put most every best dress on, to church.
Better. I'm better. It's when you're better, afterwards.
Big. When you're big. I'm sort of big.
Bitter. It means a bitter candy.
Black. Blackin' shoes. Black stockings. Black stoves.
Blind. Means a blind up in the window. When you have to keep your eyes shut.
Blue. Two kinds of blue, one, two, three, four, five, sik, eight. Means blue ribbons. There's no blue sky (looks out of window at clouded sky).
Both. It means both people.
Broken. Means when you break glass.
Brown. Means brown ribbon and brown paint, brown shoes.

C

Careful. To be careful and not break things.
Cheap. Cheap things; you get 'em at the store.
Clean. Clean dishes. I'm going to clean up this.
Cloudy. Under the cloudy sun. The sun goes again behind the sky at night. It means raining.
Cold. When you're cold in the winter.
Colored. It means a colored shirt, colored dress.
Comfortable. It means comftabable. Comftabable seats, chairs.
Cross. When you're naughty it means cross. When you're cross, why, you cry.
Cunning. There's a cunning little baby.
Cute. There's a cute little baby.

D

Dark. O, it's so dark, and my neck's so warm! It's dark in the night.
Deaf. When you can't hear.
Dear. A little bit of a tiny deer. O, the cunningest little deer. The little deer baby (she understood *deer*). Mama dear and tagga dear and gagga dear!
Dirty. O, I'm so dirty! You go and wash yourself.
Done. It's done. The supper's done.
Dry. When things are dry and no good, you give 'em (*i. e.*, bread) to horses.
Dusty. Dusty hat-cap. It means the floor's dusty.

E

Early. Early is the roses coming. Early in the morning, after breakfast, you go out to play under the bamboo-tree.
Easy. I can do this so easy.
Either. It don't matter which I have. I'll take that, and then you'll have either.
Else. When somebody else is in your house.
Empty. You empty under the house. A pail that's been full of water.
Enough. That's enough! That's enough.
Everything. Everything! It means about every, every question.

F

Fat. Fat, fat old man. Fat is— (imitates a fat man by sticking out her stomach, and walking).
Few. When you are few under the pussy-tree. Just a few pussy-willows we have got.
First. My first. It means the first day of to-morrow.
First-rate. It means a straight dog.
Five. Five, my gracious! Five o'clock.
Four. Four, my gracious! Four people.
Frightened. When you're frightened, you're afraid.
Full. O, I'm so full! of things that I eat.
Funny. It means a funny picture.
Fussy. When you're fussy, when you're naughty, it means fussy, O so cross!

G

Glad. I'm so glad! That's what you say.
Going. I'm going out in the play-house. Good-bye!

Gone. I'm gone,—then me have gone. It's gone down into my stomach.
Gray. Gray (*i. e.*, graham) bread.
Great. (Misunderstood at first "grape", and she said "grape-nuts".) I'm a great big girl.
Green. It means green grass, under the bamboo-tree.

H

Hard. It's so hard,—ice.
Heavy. Heavy trunks, heavy tables, heavy stoves.
High. High trees, high poles and high mountains.
Hot. Hot days. Hot summer days. 'Cause it's summer.
Hungry. I'm so hungry! You want something to eat.

K

Kind. I'm kind to you.

L

Lame. Means a lame leg, of course. I always call those things (*i. e.*, crutches) 'hockey sticks,' that you have when you're lame.
Last. Means when peaches last.
Late. Means late in the night.
Lazy. When you're tired it means lazy, of course.
Like. I like it. Like those little twins.
Little. Little bits of twins. Little mouses.
Lonesome. I'm so lonesome, ain't you, when you're all alone?
Long. A long, long bridge. A long hog.
Loud. Mama! (calling aloud), just like that. When you talk loud.
Lovely. That rosie is so lovely!
Low. It's so low. You mean low or high? Low bureau (making motion to indicate its lowness).

M

Many. There's so many people,— in the church of course.
Mistaken. I'm mistaken. Means I make a mistake.
More. I want some more ralston (a breakfast food).
Most. It's most done.
Much. I don't want much.
Muddy. It's so muddy in the drive-way, 'cause it rained, of course, don't you know better?

N

Narrow. It's so narrow. That narrow road (looking out of the window).
Naughty. Sometimes I'm naughty, when I can't have anything I can't have, when I ca n't have things I want.
Near. Near people's houses,—other houses. Near ready.
New. New dishes from the china store. New cloths. New box.
Next. Next day, of course.
Nice. I guess there 'll be something nice for dinner.
Niece. Little nieces, anybody's. I'm your niece.
Noisy. I hear something: pound! pound!

O

Old. That 's so old,—a piece of cloth.
One. One, two, three, four, five, six, eight.
Open. Open the gate and go right in.
Other. When you have somebody else with you. My other sister.
Overhead. I hear somebody overhead.
Own. It 's my own little girl.

P

Passed. We passed somebody. We passed the cows under the bamboo-tree.
Past. We went a-past the carriage.
Poor. Poor old horsie! 'Cause the flies were botherin' him.
Precious. Mama says I 'm precious. 'Cause I 'm a little girl, she calls me precious.
Pretty. I think that ribbon's so pretty. Let 's get some of that ribbon. Cloth, and sky, under the bamboo-tree. Pretty flowers.
Purple. It means a purple ribbon.

R

Rather. I 'd rather do it.
Ready. I 'm ready to go to church.
Real. It 's real. A real mouse.
Red. It 's a red ribbon. Geraniums.
Right. Take hold of your right hand.
Ripe. It 's really ripe, and may I have it? Bananas, of course.
Rotten. It 's rotten already,—apple.
Round. A round O.

S

Sharp. This knife is sharp, and you 'll cut yourself.
Short. It's so short, my finger; the shortest is the shortest.
Sick. When you 're sick, you have to have some medicine, and you go to bed.
Silver. Silver spoons and silver sky.
Sleepy. I 'm so sleepy. When you 're sleepy, you go to bed.
Slippery. It 's so slippery under the bamboo-tree,— on the ice, and then you tumble.
Smart. I 'm so smart. The Indians smart at you with their face.
Smooth. I 'm just as smooth as anything (*i. e.*, on her skin). Books.
Snowy. When it 's snowy under the bamboo-tree, and on the leaves is bunches of snow. Ah! here the leaves come out to play.
Soft. I 'm so soft (pointing to herself) in my stummy.
Some. It 's some snowy.
Sore. My foot is so sore.
Sorry. O I 'm so sorry, my dear, under the bamboo-tree, 'cause you cried. (She makes believe cry.)
Sour. O it 's so sour,—lemons.
Sticky. This candy is sticky.
Still. Keep still!
Straight. I 'm straight! (Stands up.)

Strong. O this is so strong that I've got to put some sugar in to make it stronger. A great, big, strong man.
Stupid. I'm stupid. ("makes faces" to show it).
Sure. I'm sure it'll snow.
Surprised. I'm susprised that that turkey came along.

T

Thick. A thick winter wrapper.
Thin. A thin summer wrapper.
Thirsty. When you're thirsty, you have a drink.
Three. Five, six, eight.
Tight. This is too tight,—your dress. When I sit down, that dress you just took off, why, it pulls my neck.
Tin. A tin pail.
Tired. When you're tired, you want to go to bed, of course.
Two. One, two, three, four, five, six, eight.

W

Warm. It's so warm in the house when you have a fire.
Well. It means I feel all right.
Wet. The grass is so wet, when it rains—now.
White. White dresses and white snow.
Whole. (Misunderstood at first "hole.") That animals go in. A key-hole. Hole down the sink. Whole of a peach.
Wide. Two inches wide piece of cloth.
Wise. A wise man. I'm thinking what it means.
Woolen. A woolen nightgown and a woolen under wrapper.
Wrong. Your watch is wrong.

Y

Yellow. Yellow cloth. Daffakins (*i.e.*, daffodils). Yellow flowers.
Young. When people are young. Yes, I got to be teached.

IV

A

Again. Come again! Come free (*i.e.*, three) people, come again! Again is going to be another day.
Almost. It's almost time to go to supper.
Along. Come along!
Anyway. I'll go anyway.
Anywhere. We ain't going anywhere.
Away. I'm going away. When you're going away in the country.
Awfully. It's awfully damp when it's rainy and froggy (*i.e.*, foggy).

B

Back. Woo, back!
Badly. I so badly want to play with Mildred.

C

Certainly. Certainly! When your mother wants you to go over to the store and get some crackers, then you just go.

D

Down. Down we go! Down the elebator.

E

Ever. I don't believe it 's ever going to clear up, do you?
Everywhere. We 're going everywhere.

F

Far. We 're going awfully far.
Fast. Woo, get up! For the horsie to get up, that means fast.
Forth. To go back and forth.

H

Here. I 'm here.
High. So high up here. A high mountain.
How. When they show you how to write other letters they don't know how to.

J

Just. I 'm just starting.

M

Maybe. Maybe Mildred 's out there, don't you think?

N

Never. Never I 'll come out on a rainy day. Never children either.
Nicely. Do it nicely.
No. No! I won't do it.
Not. Is it not?
Now. Now is the daylight.

O

Off. I 'm going off into the playhouse.
Once. Once we 'll do it and see how we will.
Only. Only alone.
Out. Out we go, out to play. Come out under the bamboo-tree.
Outside. Outside of the house.
Over. It 's over,—the chicken-pox.

P

Partly. Partly of the apple.
Perhaps. Perhaps I go out to play when the sun comes out.

Q

Quick. Quick! quick, quick, before the laundry-man comes!
Quite. Not quite done.

R

Really. Really I will, and go fishing.

S

Slow. You 're so slow, my mama dear.
So. So I will, so I will.

Softly. It means when you talk softly.
Sometime. Sometime we'll go fishing under the tag-pole tail.
Sometimes. Sometimes we won't and sometimes we will.
Somewhere. Somewhere we are going, either down to the camp, either in the pasture to get some blueberries.
Soon. Soon we'll do it under the bamboo-tree.
Surely. Surely we'll go out to play.

T

Then. Then we'll come under the Prouty tree.
There. O I thought she'll be out there.
To-day. To-day is the dancing day.
Together. Together we are going to be under the ice-cream table.
To-morrow. To-morrow is the milking day.
To-night. To-night is going to be the ice-cream day.
Too. It's too cold for winter day to come.
Two. Two people. One, two.

U

Undoubtedly. I don't know who *undoutely* is.
Up. Up the ladder. Up the chimney. Upstairs.

V

Very. Very, indeed. When we come in the house, it's very good if we have some banana ice-cream to eat.

W

When. When are you going? Next day after to-morrow.
Where. Where are you going? Nowheres, only but in the play-house
Why. Why are you doing it?

Y

Yes. Yes, sir. Yes, I'll go to the store.
Yesterday. Yesterday didn't you go? Didn't tather go yesterday?
Yet. Yet, we haven't come home.

V

Anybody. Anybody will come to meet our folks.
Anything. Anything we'll ever do it.
Anywhere. We ar' n't going anywhere.

Everybody. Everybody 's going to church.
Everything. Everything we're coming at.

He. He, the sailorman.
Her. Her is a girl.
Herself. Herself is a little girl, and she plays.
Him. Him was a man.
Himself. He is a man.
His. His is a man.

I. I stole the rats. I'm a lady, you 're a he.
It. It 's a cunning little dog.

Me. Means me. I 'm a lady.
My. My gracious, it 's raining!
Myself. Myself is a little girl under the bamboo-tree.

Our. It 's our house.

She. Means she, a girl.
Somebody. Somebody 's at the door.
Some one. Some one is coming at the door.
Something. Something well write.

That. That is a mouse and that is a fly.
Their. That 's their house.
Them. Them is the dog.
Themselves. When the little children come out to play, why, themselves are out there.
These. These is a doll.
They. They, people in the house.
Those. Means the cat.

Us. Us under the apple-tree. Us is in this house. The people that live in this house.

We. We under the apple-tree. We in this house. We are the Chamb'lings.
What. What you doin'? What you playin'?
Which. Under which tree?
Who. Who is the gentamul?

You. You are the gentamul. I mean tather.
Yourself. You 're the lady (spoken to her mother).

VI

About. We 're bouting around the country. About we 've got to run with the two dolls.
After. Sportie and Bobbie (two dogs) run after stones.
Afterwards. Afterwards we 're going to a party.
Around. Run around.
At. We 're at it. We 've just got the job.

Before. Before we got the job we were sorry. I thought you may like that.
Behind. Behind the church,—only the grass, of course.
Beside. Beside the people.

For. What ye' going out for? Nothing.
In. In we came in the house. It 's going to rain in four inches minutes.
Inside. Inside the stove, that 's where you put fire.

On. On the stove is where you cook things that need to be cooked, on the top.

Through. Through the gate we come.
To (misunderstood *two*). One, two, three, four, five, six, eight.

Under. Creeping under the table.

With. With the little girls came out to play.

VII

Get up! Get up! Get up!
Good-bye! Good-bye! I 'm sorry you 're going. Good-bye!

1175. Good morning! Good morning! I 'm glad I got up. Good morning!

Good night! Good night! I'm going to bed. "Good night again!" said the gentamul.

Hello! We 'll hello! Say "hello" to the people, don't you know?

Peek-a-boo! Peek-a-boo! Peek-a-boo! When you 're saying "Peek-a-boo!" you 're playing.

Please. Please give it to me.

1180. Thank you. Thank you for a cracker or a banana.

Whoa! You say it to the horse. *Wo! Wo!*

VIII

As. As we 're coming out to come under the apple-tree.

Because. Because I want to play.

If. If we come, or when you come.

1185. Till. You can stay out till dinner-time, and then come out again, and stay till supper-time.

While. A while you can stay, but pretty soon we 'll want you to come in.

1. A number of the "definitions" and "meanings" illustrate the rapidity of the thoughts of children and the subordination of grammatical accuracy and syntactical form to their immediate expression. Examples of this are Nos. 39, 113 (in part), 160 (in part), 183, 289, 336, 525, 538, 991, 993, 1045, 1078, 1081, etc. Her "definitions" of the following are of interest here:

Biscuit. It means to eat, dogs and people, but, tather, "Mittens" (the cat) loves cheese.

Didy. It means to wear, little babies, to wear on her bottom.

Moccasin. To put on your feet, little Indians.

Stick. For a walking-stick an' trees.

Tight. This is too tight, your dress. When I sit down, that dress you just took off, why, it pulls my neck.

2. Some contain graphic descriptions or pictures of a lively nature resembling those of certain primitive peoples. Such are, *e. g.*, Nos. 3, 44, 54, 64, 98, 111, 113, 169, 183, 277, 281, 338, 533, 541, 559, 636, 665, 674, 697, 700, 765, 791, 925, 932, 941, 1010, 1028, etc. Of these the following are to be specially noted:

Animal. Animal is animal and *tanimal*. When animals go out to walk. And when the lions go and they take the giraffe. Here 's the lion looking for the giraffe. Here 's where the windows go to bed . . . because they wash 'em so much.

Chip. Chip means a chip. Did n't we go to the chip house (*i. e.*, ship carpenter's shop) at Bayville, to pick up chips? It (wood shaving) feels as if it were a very piece of curled up wood.

Dog. A dog means a dog. *A-h-y-c-h-t*, that's the way I spell dog. It means to walk around and eat. Dogs chase cats.

Duck. There was a hundred of ducks at Elm Park, you never saw. It swims in the water. They wigged their little hand like this (imitating), and they dipped their heads down in the water, as soon as they got some crackers.

Moon. Moon is in the sky at night. It 's out of the sky. It looks at the children go to bed, then it goes into its own sky.

Snowy. When its snowy under the bamboo-tree and on the leaves is bunches of snow. Ah! here the leaves come out to play.

Certain of these "definitions" of children amount to short stories, or "romances."

3. Contrasted with those under the second heading are the numerous "definitions" summed up in the brief phrase "to eat." Such are Nos. 250, 307, 326, 327, 352, 355, 375, 380, 563, etc. Often instead of "to eat," such phrases, etc., as "it means to eat" (Nos. 24, 217,) or "means to eat" (Nos. 43, 284, 373), "it means for eating" (No. 16), are employed ; at other times modifying words are added, as, *e. g.*, Nos. 31, 39, 49, 84, 90, 107, 126, 135, 187, 210, 239, 385, 419, 432, 441, 457, 465, 525, 552, 592, etc. Of the same sort are many "definitions" consisting of simply "to wear," or of "to wear" with similar modifying words or phrases. The number and nature of these indicate the importance of food and dress at this age.

4. Occasionally the "definition" is the briefest possible, containing but a single word, as in Nos. 76, 230, 273, 835. The "meanings" of this kind are curiously very far apart:

Gingham. Cloth.
Rose. Rosebush.
Sneeze. Ke-tchoo!

"Definitions" of two or three words are quite common (Nos. 42, 85, 153, 154, 180, 193, 219, 229, 253, 254, 260, etc.).

5. "Definitions" without the use of words at all, by simple performance of the action indicated or pointing out the object questioned about occur occasionally as, *e.g.*, No. 895, where, when asked the meaning of "Whisper," she said nothing at all, but going up to her mother pretended to whisper in her ear.

6. "Definitions," accompanied by acting them out, in whole or in part, are common. Such are Nos. 11, 183, 188, 274, 467, 566, 746, 747, 748, 752, 809, 834, 842, 843, 857, 859, 867, 876, 877, 888, 898, 917, 953, 983, 985, 1036, 1037, etc. The best examples are the following:

Baby. It means babies that creep,—just like this (she illustrates by creeping).

Hopscotch. That 's hopscotch (she imitates). You stand up and put your foot like this, and put your foot down and around and then skip.

Tack. To pound in the floor an' make rugs stay down (she stamps).

Kick. When you kick you just put up your legs like this (kicking).
Kneel. Kneel down to a piece of cloth on the floor (kneeling).
Laugh. Ha-ha! (laughing).
Smile. When you 're good you smile (smiles).
Swim. When you swim in the water (illustrates it on the floor).
Think. When you think like this (puts her head on one side and "looks wise").
Walk. When you walk, why you stand,—and I 'll show you. This is the way you walk (she walks).
Wink. Just wink with ye' eyes (she winks).
Fat. Fat, fat old man. Fat is—(imitates a fat man by sticking out her stomach and walking).
Loud. Mama! (calls this aloud). Just like that. When you talk loud.
Straight. I 'm straight ! (stands up).
Stupid. I 'm stupid. ("Makes faces" to show it.)

7. "Definitions," in which the words used are accompanied by pointing out, touching, etc., the object or other thing referred to, are illustrated by Nos. 13, 99, 123, 147, 161, 188, 189, 190, 199, 202, 250, 433, 495, 511, 512, 632, 651, etc. The best of these are :

Clover. I 'll go and get one, and then I 'll tell you. It means something like this (she points to the letter M). It 's just a flower.
Curls. It means these (pointing to her own curls).
Dimple. Here 's my dimple (she points to her own chin, where she has one).
End. Here 's end (she points to the end of the sofa). It 's the end of a couch, end of the bed, of table.
Half. One of these is half (she points to a piece of paper torn in two).
Sky. It means up in the ceiling. Away up only but 'cept out there (pointing outside).

8. In a few "definitions" she contented herself with simply saying "this", and pointing out the object, or acting the thing out. Examples of this are Nos. 462, 467, etc. Following is a good illustration :

Rest. This (she was resting in her mother's arms).

In some others appears "this is." She sometimes used "these", "that", "those" in similar fashion.

9. Very common are "definitions", introduced by "it 's", "it is", "it means", etc. Often the "it" is dropped, and the definition begins with "means".

10. The type of "definition" formerly much in demand in the schools, where the pupil had to begin with the name of the thing itself (often being made to use the indefinite article *a* and the verb *is*), is very common. Following are examples :

Buttercup. Buttercup means a flower.
Car. A car means to ride in, of course.
Food. Food means for babies to eat.

11. The infinitival form of "definition, indicative of pur-

pose, etc., is also very common. It is illustrated by the following:

Book-case. To put books in.
Door-knob. To open the door, if it is n't locked.
Envelope. To put letters in.
Fork. To lift your dinner with.
Gate. To go in.
Leg. To walk with.

Often the "definitions" in which "for" also is used, occur, as, *e. g.:*

Eyelid. For your eyes to live in.
Jar. For cream to go in.

12. The "definition" with a "when" clause is very common. Good examples are:

Bib. When any berry goes bad, you must put your bib on.
Breakfast. When you 're hungry you eat breakfast in the morning.
Bureau. It means a bureau. Means when you dress you look at the mirror and you get at it.
Company. It means when people call, whenever you have anybody.
Mama. When a mother is gone, to take care of you.
Night. When you go to bed.
Rainbow. When it rains you see a rainbow.
Sleep. It means when you 're tired, why, you go to sleep.
Summer. When the daisies grow. When every other thing grows.

13. The "definitions" containing "where" are illustrated by Nos. 52, 155, 391, 397, 399, 460, 468, 474, 493, etc. Of these the following are the most interesting:

Park. It means where ducks are.
Pasture. Where the cows are.
Register. Means where the heat comes up, of course.
River. Means where you get drinks out of.
Shade. It means where you sit under.

14. The use of "what" and "that" in the beginnings of "definitions" seems not to be very common. Following are a few examples:

Handle. That 's what you take hold of.
Iceman. That takes the ice up.
Milk bottle. That the milk 's in.
Pitcher. That 's to have water in.
Schoolhouse. What the school is.
Trunk. That you pack things in.
Window. It means that you open.
Woods. Means that you go in.

15. The employment of "why," often in a sort of explanatory or excusatory fashion, is exemplified in Nos. 25, 29, 54, 73, 209, 231, 299, 416, 494, 636, 660, 664, 674, 676, 684, 697, 700, 705, 725, 736, 742, 743, 770, 786, 855, 905, 913, 936, 1045, etc.

The most noteworthy of these are the following:

Bud. It means a bud, and if it 's all out you pick it, and if it is n't why, you don't.
Flour. Why, you make bread of it.
Lap. When you have a little girl and she wants to sit down in her mother's lap, why, you let her.
Picnic. When you go out to have a picnic, why, you have one.
Shadow. When you 're walking around on sunny days, why, you see a shadow of yourself.
Wind. Why, it blows the shutters shut when anything is windy.
Bake. It means when you bake, why you cook.
Call. When you call on people, why, they 're home.

Another phrase used in a similar way is "of course," or "course."

16. "Definitions" containing an "if" clause are illustrated by the following, Nos. 398, 405, 601, 756, 1115, etc.

Peas. To eat with cream, if you want, and, if you don't want it, without.
Tree. To sit under, if it 's shady.
Let. When you let the little girl go out to the store, if she's big enough.

17. The "definition" with "because" or "'cause" occurs in Nos. 335, 423, 991, 1009, 1032, etc.

Pills. To take because you have to, when you got a headache.
Muddy. It 's so muddy in the driveway 'cause it rained, of course, don't you know better?
Precious. Mama says I 'm precious. 'Cause I 'm a little girl she calls me precious.

18. The use of "just" as a modifying word in "definitions" is illustrated by Nos. 22, 61, 88, 91, 98, 133, 166, 215, 217, 233, 267, 293, 294, 333, 346, 354, 385, 402, 404, 443, 726, 741, 746, 853, 884, 898.

Bath. It means bath, why, just bath.
Bow. It means just a bow that you tie on your hair.
Camp. Means just to camp.
Dishes. Just to wash.
Mischief. Just mitschief.
Pudding. It means to eat,—just the way it is.
Wink. Just wink with ye' eyes.

19. Some "definitions" are offered with the fervor of new discoveries. As *e. g.*, Nos. 54, 762.

Bone. The dogs eat bones, don't you know! Why, there 's bones in *you!* There 's your cheek-bone! Feel if you can't see my cheek-bone! I can feel my own tooth!
Look. You look at the sky when its pretty. O, my sky has gone blue!

20. Some contain a sort of rebuke of or reflection upon the questioner. Examples of this are Nos. 159, 164, 211, 287, 880.

Dictionary. That 's what you 're making. Do other tathers want to make a dictionary of their little girls?

Dirt. Means to dig in, just the same as down in the yard. I wonder why he wanted to know what dirt is?
Fly. To catch for the lizard. Lizard loves flies, don't you know? Don't you know England flies are green?
Keyhole. To put the key in. I tell you what 's a good word, *jumaty-jum.*
Understand. I understand,—yes, I do,—questions.

21. Some of the "meanings" and "definitions" are of a type comparable to the names of the objects conceived in many primitive languages. Such *e. g.*, are Nos. 4, 12, 23, 104, 188, 194, 214, 252, 291, 361, 554, etc.

Ankle. Ankle means to walk with.
Back. Means so you can lean against.
Bead. It means stringing.
Chair. Chair means to sit in.
Eyelid. For your eyes to live in.
Hammer. To build a house with.
Knee. If you have a knee you can sit down with it.
Neck. Your neck that your head is on.
Summer. When the daisies grow. When every other thing grows.

22. Onomatopæia figures in a number of "definitions", as *e. g.*, in Nos. 139, 177, 752 ,772, 793, 835, 842.

Cow. A cow says *moo-oo-oo!*
Dove. *Pidj! pidj! pidj!* (She calls a pigeon.) If I caught one of those pigeons, that was a pigeon.
Laugh. *Ha-ha!* (laughing).
Mew. When the cat says *mew-ew!*
Quack. A duck says *quack!*
Sneeze. *Ke-tchoo!*
Squeal. When you *squee-ay-yep* (she squeals).

23. In several "definitions" occur words of her own invention, or "nonsense-words," in and out of relation to the subject. This is illustrated by Nos. 3, 14, 48, 107, 169, 275, 287, 354, 384, 390, 421, 941.

Bag. It 's bag, and 'course for bags. And I don't want to tell you any more. For rags and tags and *tadags.*
Block. Means blocks that they build the sidewalk with. I know what wood is for. It 's to put in the fire and *tumpety tump.*
Cherry. Cherry means to eat, to cherry *muzzums.*
Horse. To ride on *backety-dack.*
Keyhole. To put the key in. I tell you what 's a good word, *jumaty-jum.*
Music. Just *meyowsic.* To play on the piano.
Overshoe. To put on your *routie-trouties.* To put on your first foot. To wear in the winter.
Pansy. To pick. It means a flower. Don't *timbals* me any more.
Pig. It 's a crying pig. Means a *ollish.* It means a animal or anything.
Dear. Mama dear and *tagga* dear and *gagga* dear!

24. The way in which ability to use a phrase or set of words outruns clear "definition" of the "meaning" of the chief term, or, rather, perhaps, how the sense of such use and

the joy of using it cause "definition" to be forgotten or avoided, is illustrated by Nos. 228, 602, 634, 774, 838, 860, 914, 951, 963, 996, 1136, etc.

Gentleman. He 's a gentamul. Ladies and gentamul.
Trouble. It 's too much trouble to do that.
Whole. You say, "I want the whole of it."
Mind. When you mind your mother.
Speak. It means when you say, "How do you do?"
Astonished. I 'm astonished!
Enough. That 's enough! That 's enough!
Glad. "I 'm so glad!" That 's what you say.
My. My gracious, it 's raining!

25. The effect of words caught up from the adult environment, such as the refrains of popular songs and the like is seen in the following, all showing the influence of "Under the Bamboo-tree":

Sing. Sing a song *under the bamboo-tree.* I taught it to myself.
Skate. When you skate on the ice in winter *under the bamboo.*
Early. Early is the roses coming. Early in the morning, after breakfast, you go out to play *under the bamboo-tree.*
Few. When you are a few *under the pussy-tree.* Just a few pussy-willows we have got.
Green. It means green grass *under the bamboo-tree.*
Passed. We passed somebody. We passed the cows *under the bamboo-tree.*
Pretty. I think that ribbon 's so pretty. Let 's get some of that ribbon. Cloth, and sky *under the bamboo-tree.* Pretty flowers.
Out. Out we go, out to play. Come out *under the bamboo-tree.*
Sometime. Sometime we 'll go fishing *under the tag-pole tail.*
Soon. Soon we 'll do it *under the bamboo-tree.*
Then. Then we 'll come *under the Prouty-tree.*
Together. Together we are going to be *under the ice-cream table.*
Myself. Myself is a little girl *under the bamboo-tree.*
Winter cloud. I wish I could go out *under the winter cloud.*
Us. Us *under the apple-tree.*
As. As we 're coming out to come *under the apple-tree.*

She was, of course, accustomed enough to being "under the apple-tree", but the use of the phrase in the last two "definitions" cited was apparently due to "under the bamboo-tree".

26. Not infrequently appear errors due to mishearing or misunderstanding, especially in the case of words pronounced alike, nouns, adjectives and verbs that are homonyms, or differ simply in spelling and not in sound. Examples of this are Nos. 25, 473, 523, 810, 924, 941, 966, 1170, etc.

Bear (*bare*). I thought you meant bears. It 's bare of your little arms,—you mean bears that walk. Why, they 're bears that walk around.
Blind. Means a blind up in the window. When you have to keep your eyes shut.
Dear (*deer*). A little bit of a tiny deer. O, the cunningest little deer. The little deer baby. Mama dear and tagga dear and gagga dear!

Whole (*hole*). That animals go in. A keyhole. Hole down the sink. Whole of a peach.

27. Many "definitions" contain observations of sociological facts, events of family life and other related phenomena of a very interesting nature. Examples of this are, Nos. 17, 38, 95, 101, 113, 119, 132, 158, 168, 171, 198, 201, 217, 243, 276, 320, 321, 343, 348, 349, 370, 391, 409, 557, 566, 578, 600, 635, 676, 684, 709, 720, 721, 743, 756, 760, 765, 770, 776, 785, 806, 813, 818, 930, 1009, 1069, 1095, 1110, 1162, etc.

Bank. For money, money, money!

Birthday. Well, birthday means when you have nice pretty presents.

Card. A ice card, you mean, tather, or a calling card? A ice card means to put out, and a calling card means to take with you, if anybody is going out.

Doctor. Doctor means a lady (her physician is one). They give medicine to people. Doctor means a man. Doctors like tather, they write, write, read, read, write.

Father. Means a tather. To take care of little girls when their mother is gone out.

Fence. Is to keep little children from going over the fence into the next yard.

Friend. Just a friend of yourself. A friend does anything she has to.

Husband. Means to take care of you every time you go out. He stays home and works.

Mama. To take care of you. To work. Love me, of course.

Man. When a mother is gone to take care of you.

Mother. To take care of you, and work, and iron.

Party. Why, it means when you have anybody to come, and then you go to it, if anybody asks you to.

Thanksgiving. When you have chicken (*i. e.*, turkey) and desert.

Uncle. Means to take care of you when your father is away.

Wife. Means your wife that takes care of you.

Fold. When you fold cloth and dresses, when you put 'em in a trunk.

Live. Everybody does live in a house.

Make. You make cake and rolls and things, and bread. Tather makes lemonade. I make things in the playhouse.

Meet. When it's people that you know, why, you meet 'em sometimes.

28. Herself, her own experiences, and lack of experience, etc., are cited or referred to in very many "definitions" noted in the first person. The most interesting of these are the following:

Bluebird. Well, the bluebirds go and go. I wonder if that bluebird in our shed—I wonder how he got killed down in Bayville.

Bone. The dogs eat bones, don't you know? Why, there's bones in *you!* There's your cheekbone! Feel if you can't see my cheekbone! I can feel my own tooth!

Bubble. Bubble means you blow bubbles. Now I wish I blew bubbles, so I could be a Frenchman!

Darling. I'm darling.

Daughter. I'm daughter.

Dimple. Here's my dimple (points to her own chin).
Dollar. If I had sixty dollars, I'd pay for a bed. If I got one, I'd pay for it with all my money, and pay for the rent.
Folks. They're my own folks.
Mug. I call it cup.
Picture. It means a picture of me.
Roof. (*i. e.*, Ruth). It's me.
Thanks. When you give me anything, why, I say, thank you.
Build. It means you build a house. Yes, sir, if you please, I'd like to build a house for you, very quick!
Could. I could. I could play anything.
Fit. When you have a fit. I had a play-fit.
Fool. When you fool people. I was just fooling a few minutes ago. I was fooling I was pounding.
Grown. When I get to be a big girl.
Love. I love everybody I know. I love mama the most, and Betty, my doll. I love tather.
Need. When I need something. I need to wash.
Remember. I remember things that I told long ago.
Undress. I undress myself in the night.
Wonder. I wonder what I'm going to do next winter. I'm going to build house and snow-cakes.
Afraid. I'm afraid of thunder, afraid he'll kill me.
Big. When you're big. I'm sort of big.

Of course, she often refers to herself by indirection and the "you" is very commonly employed where "I" might properly occur.

29. Some of the "definitions" contain nature-study items of an interesting sort, as *e. g.*, Nos. 3, 5, 30, 39, 44, 50, 123, 152, 156, 169, 177, 202, 211, 218, 338, 399, 533, 554, 762, 816, 925, 932, etc.

Blackbird. The blackbirds that come on Mrs. Wooten's lawn are lovely. They don't sing very nice. They love bread, and robins love worms.
Frog. Toad you mean. Frogs live in water. They live under the porch.
Look. You look at the sky when it's pretty. O, my sky has gone blue!
Cloudy. Under the cloudy sun. The sun goes again behind the sky at night. It means raining.

30. Analogy and comparison enter into a number of definitions. Such *e. g.*, are Nos. 1, 410, 411, 561.

Acorn. It's meant for a pine-apple.
Pepper. It means to put on things. It is n't like salt; it's something like black dirt.
Peppermint. Peppermint means to eat. It's something like white sand.
Swan. It means a duck, as I call 'em.

31. A number of definitions" are, for a child, psychologically or even lexically more or less perfect or satisfactory, *e. g.*, Nos. 8, 35, 36, 82, 95, 97, 105, 114, 130, 148, 153, 154, 160, 168, 175, 186, 191, 192, 225, 249, 256, 257, 281, 357, 362,

365, 370, 395, 429, 433, 436, 460, 478, 516, 520, 539, 574, 579, 591, 604, 608, 614, 655, etc.

Apron. It means to wear so you won't get your dress all dirty.
Buttonhole. What you button the buttons in.
Chalk. It means to write with on the black.
Door-knob. To open the door, if it is n't locked.
Enjoy. It means that you have a good time.
Envelope. To put letters in.
Evening. Evening comes before night.
Nest. Birdies to sleep in.
Parasol. To keep the shade out of your eyes, when you have n't got any hat, when it 's sunny.
Round. A round O.
Tears. When you cry it 's tears.
Toes. Means part of your feet.
Visitor. It means your caller.
Yolk. It 's the yellow of an egg.

32. In a few cases she has unintentionally or deliberately misunderstood the word, not knowing it, or offering some inappropriate "meaning". Examples of this are Nos. 145, 435, 956, 1091, 1013, 1145, 1149, etc.

33. A few of the "definitions" have a sort of genius-touch about them. Such, *e. g.*, are the following:

Bubble. Bubble means you blow bubble. Now, I wish I blew bubbles so I could be a Frenchman !
Fern. These are ferns, these are feather-ferns (she points to a little feather-duster in her hands). You pick 'em.
Fit. When you have a fit. I had a play-fit.
Moon. It 's in the sky in the night. It looks at the children go to bed, then it goes in its own sky.
River. Means where you get drinks out of, water, and catch fish, and throw stones in.
Sunset. It means up in the sky is the sun in the night. He goes up in the sky and downstairs.

The authors have not sought to discuss exhaustively the psychological and pedagogical data contained in this record, but present it as are presented the texts of primitive languages, in its entirety as an "original document" of childhood, which others can study and interpret according to the bent of their genius and their skill in explanation. It is here given just as it left the child-mind. The "meanings" are, after all, only a part of the linguistic material contained in these pages.

A FEW STATISTICAL FACTS FROM JAPAN

By Tadasu Misawa

There appeared in recent numbers of the "Child Study" magazine of Japan, a few statistical studies concerning the physical growth and health of school children in that country. We give here an abstract of salient facts in them. One of these studies is concerned with the sight of students. (v. 12, No. 1, July 1908.) According to the annual report of the Department of Education for 1907, 38.8% of the boys and 12.9% of the girls in the schools directly controlled by the government were near- or far-sighted. The number of boys examined was 15,408 from 37 schools of different classes, the number of girls 622 from 3 schools, including two higher Normal Schools for girls, and one Girls' High School attached to one of them. Comparing with the statistics of the previous year a decrease of 0.3% for boys and an increase of 0.7% for girls are shown in the number with defective vision. The proportion varies greatly according to individual schools. With the boys the amount of myopia ranges from 8.6 or 5.3% to 38.9 or 36.7%, and with the girls 7.5 to 15.6. If we classify the subjects according to their age, we see a wide difference between the younger ones attending the lowest grade of High School and the older ones in the higher institutions. Among 36 boys 12 years of age there were only two found to be myopic the rest being of perfect vision, while among 1,601 boys of 20 years of age 530, nearly ⅓, were suffering from myopia. With girls, there were 3 cases of myopia among 46 at the age of 13, while among 78 subjects 20 years old there were 10 such cases.

If we examine the results of tests on the scholars above the Grammar Grades, in all the public and private schools of the whole country, except the government schools already mentioned, we find the proportion of those having normal vision to be 87.0% for boys and 90.8% for girls, which shows an increase of 0.4% for the former and of 0.2% for the latter, over the figures of the previous year. The following table (p. 105) gives the figures for different classes of schools.

When the Middle School pupils are grouped according to their age we find that myopia has a tendency to increase with the age. Among 5,540 boys of 13 years of age about 93% had normal vision, while about 1.0% had myopia of either the left

	No. Examined.	Normal Vision.	Myopia L.	" R.
Boys.				
Middle Schools	95,290	87.6%	10.4%	10.4%
Normal "	11,963	83.4	14.9	15.2
Technical "	28,115	87.2	10.4	10.5
Professional "	1,631	71.2	23.4	24.2
Total,	137,001	87.0	10.9	9.1
Girls.				
Girls' High Schools	27,191	90.6	7.2	7.1
Normal "	4,018	92.4	6.0	6.3
Technical "	447	96.0	3.1	3.1
Professional "	43	37.2	55.8	55.8
Total,	31,699	90.8	7.2	7.0

or the right eye. But of 3,039 20-year-old boys only 80% had normal vision, while nearly 4.0% were myopic either in the left or the right eye. With the girls in the Girls' High Schools of 3,033 subjects at the age of 13, a little over 93% were found to have normal vision, while about 1.0% had myopia either in the left or the right eye. But among 119 girls of 20 years there were only 88% who had normal vision, while 1.5% had myopia of either the left or the right eye.

From the above we see:

1. Defective vision is much more prevalent among the boys than among the girls.

2. Defective vision is much more prevalent among the schools directly controlled by the government, than among other public or private schools.

3. Defective vision is much more prevalent among the professional schools than among other classes of schools.

4. Defective vision is much more prevalent among older students than among younger ones, especially in case of boys.

Now, in the Japanese school system, intellectual studies are made much more intensive for boys than for girls. The curriculum is made different for both; and girls in the High Schools have no regular examinations, while Middle School boys have them, and those boys who go up to higher institutions have to pass many competitive examinations. Government schools, with the exception of a few schools, include the highest institutions which require longer and severer courses of training than other schools, for the entrance and for graduation. Professional Schools in Japan are of college grade, while Technical Schools as well as Middle Schools, Girls' High Schools and Normal Schools are of secondary grade. These facts in regard to the different classes of schools in Japan being remembered in consideration of the above results, we seem to be justified in concluding that myopia increases with

the years of school attendance, and as the intensity of application increases, at least, under the present conditions of method of study and school hygiene in Japan. That the sex-difference in regard to the liability to myopia may not be fundamental, but may rather be due to the difference of conditions to which they are subjected, is plausible, judged by the facts that the proportion of the defective vision is nearly the same both for boys and girls at the beginning of secondary education (1.0% for both), and that the girls in professional schools have a larger proportion of myopia among them than any other class of students either girls or boys (55.8% for each eye, although the number of subjects examined here namely, 43 is too small to enable us to make a definite statement).

It is to be regretted that the statistics give no results of examinations in regard to the vision of Elementary School children. But we might imagine from the figures for the youngest pupils in the Middle Schools and Girls' High Schools, that the proportion of myopia existing in the Japanese Elementary Schools will not be more than 1% of all children.

Another article treats the functional disorder and deterioration of the students' physique. (v. 12, No. 3, Sept., 1908.) The data are obtained from the annual medical report of the Department of the Army. The table (p. 107) shows the classes of defects and their respective proportions among the young men in Japan, on account of which they were excluded from the army enlistment or from the entrance to military schools.

The figures give the maximum and the minimum, in terms of $^1/_{1000}$, for the years 1899-1903 and 1906 in case of "one-year-service" men, and cadet school and military college students, and for 1899-1904 in case of general recruits. Army service in Japan is compulsory for all men who at the age of 20 have passed physical examination, although those for the actual enlistment are determined by lot. So the "general recruits" in our table include practically all younger men of Japan, who have reached the age of 20. "One-year-service" men are those, who, on account of their being graduates from the secondary schools and higher institutions, are given the privilege to serve only one year in the army by their wish and on their own means, instead of for the regular three years' service. A large proportion of them are either the students or graduates of higher institutions, who have been given another privilege to delay their service while pursuing their study in the school. The Military College requires the finishing of secondary education for the entrance, and admits a limited number of students, by severe competitive examination. The Cadet School is an institution of secondary grade, but the graduates from elementary schools have to make an intensive prepara-

	One Year Service.	Cadets School.	Military College.	General Recruits.
*Defective development	0.52‰	0.63–14.16	0.57–1.12	1.71–4.80
Congenital deformity	0.17–3.27	———	———	0.10–0.20
*Weak muscular structure	37.64–67.75	26.70–67.71	21.22–59.88	1.42–2.75
*Excessive fatness	0.50–4.49	0.96–1.03	0.69	———
Bone diseases	0.70–1.19	0.63–1.92	0.57–0.70	1.20–2.03
Scars and naevus	1.49–1.08	1.11–3.10	0.69–2.85	0.75–1.31
Axillary odor	1.58–1.98	0.96–5.01	0.70–1.71	0.01
Chronic diseases of nervous system	0.41	———	———	0.33–0.44
*Incurable nervous diseases	0.41–0.79	———	———	0.16–0.26
*Insanity	0.79	———	0.70	0.30–0.37
*Epilepsy	0.41	———	———	0.19–0.29
*Disturbances of nutrition	0.50–2.45	0.96–2.02	———	0.15–0.21
Leprosy	1.17–0.40	———	———	1.17–1.34
*Syphilis	1.19–4.05	0.96	———	0.02–0.08
Skin diseases	0.50–2.04	0.63–1.11	0.69–1.86	0.01–0.03
*Deformity of skull and bald-headedness	0.40–0.82	———	0.56–1.40	0.01–0.09
*Facial spasm and paralysis	0.69–1.22	———	0.69	0.06–0.09
*Conjunctival diseases	1.16–9.80	6.74–12.40	4.66–6.70	0.57–0.84
Diseases of cornea and iris	0.69–7.53	1.11–4.04	0.56–2.10	6.27–9.93
*Weak vision	0.50–4.63	1.88–6.74	0.69–2.79	0.30–0.56
*Myopia and Hyperopia	27.82–53.68	21.70–32.71	24.02–53.68	2.52–4.49
*Strabismus	0.50–1.74	1.11–2.51	0.87–1.12	———
*Defective hearing or deaf	0.99–4.36	0.96–4.13	0.93–2.79	0.37–0.58
*Ear diseases	6.19–14.41	3.10–6.90	0.56–7.70	1.37–3.10
*Nasal diseases	0.40–0.69	2.07	0.69	0.03–0.07
*Stuttering	0.50–2.86	0.63–2.07	0.57–0.70	0.01–0.02
Deaf-mute	0.40	———	———	1.00–1.50
Deformity of palate	0.79–0.82	———	———	0.12–0.21
*Anomaly of teeth	4.49–12.16	1.01–4.45	1.71–6.30	0.30–0.61
*Deformity of spinal column and pelvis	0.69–1.16	1.92–3.10	0.57–1.12	0.59–0.76
*Diseases of respiratory organs	4.13–14.29	0.96–1.11	0.70–5.59	0.74–1.62
*Diseases of circulatory organs	2.49–6.74	1.01–4.13	0.57–4.82	1.01–2.01
Hernia	4.82–11.92	1.88–6.06	0.93–3.50	4.33–6.07
Hæmorrhoidal affection, prolapsus ani, etc.	2.07–19.41	1.03–2.02	2.07–2.79	0.11–0.45
Diseases of testicle and epididymis	1.18–3.48	0.96–2.02	0.57–2.10	0.10–0.40
Swelling of vena spermatica	1.18–3.44	0.96–2.02	0.57–3.44	0.03
Atrophy of extremities	0.41–1.58	0.63–1.03	0.57–1.68	0.98–1.35
Habitual dislocation of joint	0.69–5.31	0.96–4.45	0.69–2.85	3.20–3.76
Deformity of bones	0.99–1.22	0.96–3.03	1.40	1.02–1.23
Deformity of fingers	0.99–2.90	0.63–1.11	1.38	1.87–2.57
Deformity of toes	0.41–3.38	0.96–1.25	0.56–2.07	0.44–0.54
*Curvature of foot	4.49	0.96–1.01	0.93	0.27–0.33
Other causes	0.40–1.63	2.02–17.32	0.69–2.85	0.27–0.33

* The figures marked by the asterisk are specially noteworthy from the point of view of school hygiene.

tion as well as to possess unusual ability to be selected by the competitive examination that it requires.

Now, the general recruits, in a large majority of cases, have not had more than the primary education, sometimes even less. So the comparison between them and other classes of boys is that between those who have gone through longer or shorter stages of intensive study in the school and those who have not. This comparison in the above table proves beyond doubt that the physique of the former class of the Japanese population is in a much more deteriorated and disordered condition than the latter. The difference is most conspicuous where defects and disorders can be attributed to the sedentary or other unhygienic conditions of school life. The same difference can be seen between the "one-year-service" men, who are older students and the candidates for the Cadet School, who are young boys between 12 and 14. It is remarkable, however, that some defects and deterioration are already manifested in a considerable degree among the latter. During the years 1899-1903, 17.1%–24.2% of those who applied for the one-year-service are reported as having been excluded as unavailable.

The world is amazed at the accomplishment made by Japan in completing and extending through the country in such a short time the modern machinery of education. But few people think of what cost she has had to pay and is paying for this, in the form of the physical deterioration of the better classes of her citizens. However, on the other hand, we are not without some hope of bright promise when we see the statistics in regard to the anthropometrical status of Japanese school children, in which we can trace an improvement or a possibility of improvement, of national physique. It has been a fact of general observation in Japan that the children of to-day are taller than their parents. The following figures taken from still another article in the Japanese "Child Study" magazine seem to confirm this as well as to show a beneficial effect of modern life in some other respects. (v. 12, No. 5, Nov., 1908.) According to the annual report of the Department of Education for the year 1901, the average figures for 869,014 children in the elementary schools of the whole country, in respect to height, weight, and chest-girt, are as shown in the table (p. 109).

But Dr. M. Mishima publishes the results of his own investigation made with 9,609 boys and 7,466 girls as his subjects, which show greater values for them than for the children of the whole country. See table (p. 110).

Unfortunately, the number of subjects examined for each age is omitted either by Dr. Mishima or the writer of the article, although we have good reasons to suppose that it is sufficiently evenly distributed to make the average figures reliable.

Age		Height	Weight	Chest-girt
7	Boys	106.5 cm.	17.6 kilogr.	53.7 cm.
	Girls	105.3	16.7	51.7
8		111.0	19.1	56.0
		109.5	18.4	53.1
9		115.6	21.1	57.7
		114.2	20.0	55.8
10		120.0	22.8	59.7
		118.5	21.9	57.3
11		124.8	25.0	61.6
		123.2	24.5	59.2
12		128.7	27.0	63.0
		128.2	26.8	60.3
13		133.4	29.4	65.3
		133.3	30.1	63.5
14		137.6	32.5	67.3
		137.7	33.5	65.7
15		142.1	35.2	69.5
		141.6	36.4	69.1
16		146.1	38.2	72.1
		143.7	39.7	71.6

Unfortunately again, we are not told in regard to what classes of society and what locality of the country these subjects are drawn from. But we can infer with a fair certainty that they are the children in the city of Tokio, and that they are not from the very low classes. If so, what does the superiority of these Tokio children over the rest mean? It appears to mean that they are, on the whole, brought up under a stronger influence of freer and more comfortable modern life, than the latter, and that this has shown its effect upon their physique, in increasing their size. This supposition seems to be confirmed by the relatively greater improvement with girls than with boys. We have also a reason to suppose that Dr. Mishima's statistics are taken more recently than the others. The possibility of such an immediate effect of changes in the mode of living upon children's physique is seen by the further comparison of the results of anthropometrical measurements made in the Cadet Schools and those of the two preceding ones. In these schools, the physical development of the pupils naturally is made a matter of great importance, more than in other schools.

Age		Height	Weight	Chest-girt	Head circumference	Legs
New-born	Boys	49.1 cm.	3.04 kg.	32.4 cm.	33.8 cm.	19.0 cm.
	Girls	48.7	2.87	32.3	33.3	18.8
1 week		50.6	3.04	33.5	34.4	20.2
		50.2	2.86	33.3	34.3	20.0
2 weeks		52.2	3.30	34.4	35.3	20.9
		51.7	3.20	33.6	35.0	20.5
3 weeks		54.2	3.65	35.2	36.0	21.7
		53.5	3.50	35.0	35.5	21.4
1 month		56.5	4.07	36.3	36.9	22.6
		55.5	3.80	36.0	36.5	22.6
4 months		61.8	6.05	48.3	40.5	26.1
		60.8	5.77	40.2	39.7	25.5
1 year		73.5	9.00	45.7	45.5	32.5
		72.9	8.50	44.4	44.1	31.6
2 years		79.5	10.80	46.8	46.7	35.9
		78.9	9.90	46.2	45.8	35.1
3 years		85.4	12.40	48.1	47.6	39.2
		84.9	11.50	47.2	46.9	38.5
4		91.7	13.70	49.5	48.9	43.0
		91.0	12.90	48.6	47.8	42.2
5		97.4	15.20	50.5	49.3	46.5
		96.5	14.50	49.8	48.7	45 8
6		102.8	16.50	52.7	50.2	50.4
		102.4	16.00	51.9	49.7	50.2
7		108.3	17.80	54.1	50.6	53.4
		107.2	17.20	53.0	49.9	52.5
8		113.8	19.10	55.5	50.9	56.3
		112.0	18.70	54.0	50.2	54.9
9		118.3	21.00	57.2	51.2	58.6
		116.2	20.50	56.1	50.5	57.9
10		122.8	23.00	59.2	51.5	60.8
		120.4	22.30	58.0	51.3	60.0
11		127.0	25.00	61.4	51.9	62.9
		125.9	24.40	60.2	51.7	62.3
12		130.8	27.20	63.1	52.1	64.9
		132.3	27.80	62.5	52.2	65.6
13		135.2	29.80	64.9	52.5	67.1
		139.0	31.40	65.0	52.8	68.6
14		141.5	33.60	66.9	53.0	70.3
		143.2	36.50	67.7	53.4	70.9
15		146.3	38.70	69.1	53.6	72.7
		144.7	38.20	71.9	53.7	71.7

The following give the average values for the five most recent years:

	Height	Weight	Chest-girt	Increase over the preceding year	
				in height*	in weight
13	147.0 cm.	37.80 kg.	70.6 cm.		
14	152.2	42.11	72.1	5.25 cm.	5.47 kgr.
15	156.7	47.37	78.2	4.00	5.04
16	159.0	51.02	80.6	3.00	3.36
17	160.0	52.33	81.8	2.10	2.67

* Increase in chest-girt shows almost the same figures.

If we take the increase in height, weight and chest-girt as an index to a higher realization of latent physical potency, we might conclude from the above that the physical development of the Japanese nation is being enhanced and can be enhanced when favorable conditions are secured. The Japanese people seem to be structurally improving, while they show a certain tendency to deterioration, organic and functional, as the results of their changed modern life, with the school as an important agency for these. We are inclined to regard the evil aspect not as inevitable and necessary, because the hygienic care of school children in Japan leaves yet plenty of room for improvement, and is most lamentably neglected in the secondary and higher institutions, where the physical deterioration is most manifest.

It is to be regretted that the results of anthropometrical measurements made with the Japanese above the age of 17 have not been accessible to us. While the statistical figures above seem to warrant us in supposing that their physical growth goes on or may go on beyond the age of 17, which hitherto has been set by most anthropologists as the limit for the races outside of the white race, yet we are not able to say how far and in what degree this is done. We know that the birth rate in Japan has increased in recent years. We know that it is rapidly decreasing in Europe and the United States of America. We know that the stature of the Anglo-Saxon women is rapidly stretching within this generation, especially among those who are living the free life of modern colleges. We know that the children of the lower classes are on the average lower in height and lighter in weight than those of the well-to-do classes, and that at least among the white race there is more uniformity in the physical status between the different nationalities belonging to similar social classes than between the different classes of the same nationality. Considering these facts together with the statistics obtained in Japan, we seem to be justified in surmising that the so-called racial char-

acteristics may be as much the products of social and historical circumstances as of geographical and other physical environments; and they are after all more plastic and less stable acquisitions than we generally think, subject to human power to a considerable extent, good or bad. Here is hope for the science of school and social hygiene, for every reform movement based on human biology, as well as a warning against any short-sighted ideal in education and social politics. The creation of a superior race out of many races may be the result of a long series of eliminating and selective processes, but the process of elimination for a mal-adjusted race may be accomplished in a short time. And probably it may be well to remind ourselves in this day of eager striving for progress and reform of the fact that social forces will be effective toward the welfare of a race only in so far as they favor bringing about a more complete adjustment of the race with its natural environment.

THE BASIS OF ETHICS

By Joshua D. Varney, Cleveland, Ohio

Every human act, whether by an individual or by an association of individuals, which can be classified as right or wrong, partakes of that character because the effects of the act will have a tendency to either increase or decrease the prospective sum of human life.

If the act tends to increase that sum, it is right. If it tends to decrease that sum, it is wrong.

These definitions are deductions from the teachings of what is known as evolution; somewhat more; they are a recognition of the wisdom of the methods of the Power that rules; still more, they are a recognition of the wisdom of striving to work with that Power.

All the forces of nature appear to tend to and culminate in an abundance of life. The sum of human life, as in all forms below the human, is limited by the supply of food and shelter, and to produce these and render them available for sustenance is the aim, either directly or indirectly, of all labor whether physical or mental, and only by labor are they obtained and used. Nature does yield spontaneously many useful things, but labor is required to render them available.

In all forms of life there is generation in excess of the supply of sustenance, rendering it impossible for all that are brought into existence to live to maturity. The conditions so far have been, and probably they will always continue to be, that premature death, which implies poverty and suffering, cannot be eliminated. The supply of sustenance may be increased by opening new sources of supply and by better methods of cultivating the present sources.

Addition may be made to the available supply by economy in the use of what is produced. If all people were kind and considerate for the rights of others, the labor of that vast army which we may classify as policemen could be turned into productive channels and the supply would be increased. Efforts along all these lines have been made, are being made and we trust they will continue to be made, but excessive generation has kept pace with each improvement and because life cannot exist without sustenance, premature death is with us now; it ever has been and probably it ever will be with the race. These

are not new teachings and the statements are not likely to be questioned, and yet in the press, on the rostrum, in the pulpit and in private conversation when men and women advocate proposed movements to improve conditions, they often ignore, if they understand the situation, and speak as if it were possible to banish poverty, suffering and premature death.

Let us assume ideal conditions. Surely a desirable ideal would include the love of children and it must include a sufficient supply of food and shelter for all. Let the other features be any that a vivid imagination can supply. A simple calculation based on easily accessible statistics will show that if each child born should live to the age of seventy years, human beings would crowd each other for standing room on all the land surface of the earth in less than twenty-five hundred years. It is undoubtedly true that enough is now produced to supply all who now live, if the supplies could be equally distributed and economically used. It is probable that a knowledge of this fact is what leads people to think that suffering and premature death might be eliminated but we must not forget that excessive generation is the method of the Power that rules, and that it is as irrevocable as any of the other methods of that Power. It may be thought it is not a wise method, but there are enough problems to be solved in efforts to comply with the methods of that Power without questioning the wisdom of that which clearly is its method.

While suffering and premature death cannot be eliminated, wisely directed efforts do make it possible for more people to live with less suffering. The best results are derived from efforts which tend to give young people the disposition and the physical and mental power to care for themselves and to be considerate for the rights of others.

Let us inquire as to the effects of new and improved industrial methods. By observing the course of things around us we can in imagination go back to the time when population was not dense and each man obtained sustenance for himself and his family by his own labor, using only the tools he could himself manufacture. Under these conditions a person having some talent for mechanics decides to spend his time manufacturing a tool used by himself and others and making it to their interest to do so, his neighbors exchange their products for his tool. This being an initial step in the upward progress of our imagined society let us spend a little time in studying it and its consequences, that we may the better recognize the same features running through all future steps.

First: our mechanic, whom we will call A, would not enter into the business by a preconceived plan, but having made a tool for his own use, finds some one who in special need offers

a greater amount of products in exchange than A could produce in the time required to produce another tool. From this beginning the demand increases so that he can spend more and more time at his mechanical pursuits and because of this increased practice he works with ever-increasing skill. Working with increasing skill he produces not only more but better tools, thus producing a greater demand, and so all influences combine to make our mechanic more prosperous than his neighbors, and thus he is better able to care for himself and his dependent family.

In this picture attention is called to three things:

First: our mechanic has been impelled by the desire to benefit himself only, whatever his character may be aside from this transaction.

Second: he has become more prosperous than his neighbors, and as a consequence of the second.

Third: by the ability to better care for his family he has increased their chances to live and so has increased the sum of human life.

So much for the effect on our mechanic A, but his neighbors B and C have exchanged with him only because they could produce the products to exchange for his tools with less labor than to manufacture them themselves.

By thus giving all of their time to raising food in place of spending a large part of it in producing tools of an inferior quality, they save in the time required to produce the tool and in its efficiency in operation, and so they, too, become more prosperous than those who continue in the old way, and they, too, give better chances for long life in their families and so again add to the sum of human life. And now to the first, second and third we must add a fourth feature.

In this new industry our mechanic A, prospers more than any other single person, but he has been able to appropriate to himself only a small part of the actual good he has conferred on the world, for B and C are actuated by the same selfish motives prompting A, and they would not have continued to exchange with him had they not been benefited by the transaction.

We can see that the success of A will stimulate others and that unless he keeps in advance by constant exertion his condition will be brought to the general level, but the general level will have been raised by his acts.

From this beginning we can see other tools invented and machinery produced to manufacture the tools and other useful things, and one improvement leading to another until we have the thousand and one complications of civilization and at each step in the upward progress we see a new talent developed and

more and more people living because they can be profitably employed.

Another phase of the fourth feature must be mentioned here. Every business of importance requires services which do not call for much skill. Unskilled labor is employed because it can be obtained for less than skilled labor can command, thus allowing the skilled laborer to be more profitably employed. In this way the employer benefits both himself and the unskilled laborer. The laborer is benefited by being employed and he would not perform the service if he could be more profitably employed, and he also can feel that he is giving benefit to his employer and through him to the world.

In the first statement A renders more efficient the labors of B and C. In this last the unskilled laborer is conferring on the world the more valuable services of A and B and C. The lesson for each of us here is that there will be no continued demand for our services unless there flows from them a benefit we cannot appropriate; and another lesson is that if we faithfully perform our duties we are entitled to the honor of serving the world whether our duties are to sweep a street or to rule a nation.

With the growth of invention and consequent intricacies of interests requiring special knowledge there comes the teacher who by instructing the young, adds to the efficiency of labor. With each addition to the complications growing out of new methods there arises difficulties growing out of questions relating to values in the exchanges. More even than questions as to values there arises questions as to matters of fact. Facts may not be understood and there is a possibility of intentional misrepresentations, for we are supposed to be speaking of the first dawn of industrial and commercial life before there had been developed that fine sense of commercial honor which actuates the people of this day. This last sentence is not all irony, for the writer believes that honesty is the rule among men and that dishonesty attracts attention not alone because of its enormity, but because of its rarity. Complications arise causing ill feelings and strife. Strife causes lack of production and waste of that which has been produced. To remedy or to at least reduce the disastrous consequences of strife, the peacemaker arises to assist in adjusting differences and by his influence in saving the waste resulting from strife he as really adds to the sum of life as he who labors with his hands. It is probable that the lawgiver on one side and the religious teacher on the other are out-growths from a common root which may be called the peacemaker; one preventing strife by outward regulations, the other working for the same end by cultivating an inward impulse to be just.

It has been estimated that the death of an average adult man is a loss to the state of about one thousand dollars. Let us assume this is a correct estimate; if so, that is the value of the commodities he would have caused to be produced in his remaining life in excess of what he would have consumed, and the loss to the state is expressed in the increased cost to consumers of commodities by an amount equal to the proportion which that lost labor bore to all the commodity producing labor of the world. A small matter, but it *is* matter. If it is true that the death of a man is equivalent to the loss of one thousand dollars worth of property, then it is also true that the destruction of one thousand dollars worth of property is equivalent to the death of an average man or the shortening of many lives equal to the life of one. Surely it needs no argument to show that the destruction of a quantity of wheat has an influence tending to increase the value of the remaining wheat. That increased cost of wheat means closer economy for some people. That closer economy means in some cases a little less protection of the body with clothing, shelter or some other needed thing to resist disease. If this estimate is correct, then he who by any act has kept men idle during the time when they would have produced one thousand dollars worth of commodities has in fact deprived one human being of life.

He who by wise counsels and well-directed effort has averted such a calamity, has saved a human life.

He who has added one thousand dollars to the world's wealth has created a human life.

He who has decreased his own or another's ability or inclination to bear their share of the world's work has shortened a human life.

He who by kindly influence has enabled some despondent to take heart and again cheerfully take up his burden has prolonged a human life.

There is an old, old lesson which is ever new and ever needed. The earth is large, the number of its inhabitants is large.

The forces which move it are immense and compared with that immensity all that one or a few individuals can effect appears insignificant.

A few men in the past have had an effect which is thought to be noticeable in the welfare of the world. A very few compared with the unnumbered hosts who have died and been forgotten, but each individual of those unnumbered hosts had some influence on those around them. It is quite certain that the success of those of whom the knowledge has come to us was achieved because they had allied themselves with a large number of those who are now forgotten. A few men

have led armies in defence of human rights with results beneficial to the race. Thousands of men in humble life who are now forgotten have championed the cause of the weak and helped to give happiness to others.

A work in the West is now in progress which promises to result in the support of many thousands on land which has heretofore been regarded as a desert. There are thousands of farmers, who by intelligently directed efforts, are increasing the yield of their farms and they will die and history will not record their names.

It may be thought that in the definitions there should be qualifying words specifying the character of the life, the sum of which is to be affected, but that would not be in accord with the methods of the Power that rules. In the struggle for existence those who survive are those having the ability to survive and it is by an abundance of life that the higher characters of life are produced.

In Matthew Arnold's lecture on "Numbers" he called attention to the fact that it requires large numbers of people to produce large men.

It required large numbers to be taught, to develop an Arnold, and a country village could not have produced a Fagan.

An increase of numbers is made possible by "acts" which tend to produce a greater percentage of Arnolds and of Fagans.

In the definitions it is "acts" that are classified. Acts result from impulses.

The same impulses prompt to both "right" and "wrong" acts, depending on the circumstances producing the impulses and the degree of wisdom used in estimating the circumstances and controlling the impulses. Varying impulses and varying degrees of wisdom constitute character.

Let lists be made of two classes of characters. The first class to include desirable and the second undesirable characters. An examination will show that, other conditions remaining the same, more people could live if all had the characteristics of the first class than could live if all had those of the second class, and the examination will further show that the definitions are a correct standard by which to test not only "acts" but ideals of character.

LITERATURE.

Social Education, by COLIN A. SCOTT. Ginn & Co., 1908. 298 p.

As the title implies, the school is looked upon as a part of society, which is to fit children to live the best possible lives, to render the most efficient social service. It is not a mere extension of the state or home but a "social combination with social feelings, sentiments and needs of its own." Perhaps the keynote of the book is its constant emphasis upon the necessity of the public schools of a democracy training their children for leadership as much as for obedience, cultivating independence and individuality even more than uniformity. As our schools are organized at present, the whole stress is laid upon uniformity and obedience, and even these virtues and the habits cultivated are not of the sort that is serviceable in daily life outside the school. Whatever feeling of responsibility is trained is responsibility to the teacher, not to his fellows or to his work. There is a great gap between the school and life, due largely to the failure of the school to test its own work. How can it test it? The author thinks that the only test is whether the pupils continue to do spontaneously the things which the school requires. "When one lights a fire it ought to keep on burning without a constant application of matches." According to this test the schools are largely failures. Such a test should be provided for in the organization of the school itself, *i. e.*, there should be opportunity for the children to do just what they please at certain times, and what they please to do will reveal what parts of the school are most affecting them.

The author next goes on to give a very appreciative account of these experiments in education: Dr. Reddie's school at Abbotsholme, the George Junior Republic, and Dr. Dewey's Experimental School.

Dr. Reddie's school is described as a monarchy with a well-beloved monarch at the head, which attains wonderful results by the admiration and imitation of the monarch, but which is limited in the development of the highest qualities of leadership in its subjects because they cannot be given the full control and leadership which alone will develop those qualities. "The boy will be forced to remain, so far as the highest appreciable features of his model are concerned, in a passive attitude and await some future time before he can attempt the active realization of his ideal. When he finally comes to it he may find, or others for him, that his socially active and inventive powers are weak and undeveloped." He needs an opportunity in his turn to direct others and to mold their opinion, while he, as the leader, is influenced by them.

The George Junior Republic is similarly described sympathetically, but the criticism is made that here the emphasis is too strong on the side of the mere governmental apparatus, and not enough on the higher ideals and aspirations so characteristic of adolescence. At the same time, the fact that these boys and girls are delinquents, is not overlooked. Such systems as the Gill and Ray self-government systems, also err in laying too much emphasis on the side of organization. The author believes that the social instinct of the children is thoroughly satisfied and training in resourcefulness and initiative provided by voluntary groups formed with a definite purpose. Of the

Dewey School the author feels that it too fails in keeping the spontaneous interest of the children, or even in appealing to it at the start in many cases, although the theory back of it is admirable.

Dr. Scott next describes at considerable length spontaneous group work as seen by him in various schools, of children from third grade up. In these cases the children were allowed to choose without suggestion from the teacher what they would do during certain periods, the only conditions being that they must describe definitely what they were going to do, and carry it out. The groups organized themselves and added others or dismissed some as they chose. They provided their own tools, materials, etc., and the teacher never interfered or helped unless asked. The results here are described in a most interesting fashion, the social interactions among the children and the widening out of their intellectual interests coming out in especial prominence. Along this line, also, a system of co-operative marking is described as employed in a Normal school. The remainder of the book is taken up with a discussion of the school subjects, the common defects in teaching them, and hints as to how real interest and initiative in studying them may be aroused.

The book is well written and extremely suggestive, and is well worth perusal by all teachers. The writer does not claim to have a completely worked out theory, but he states an ideal and shows how any teacher can do something to approximate it, even though she has no power to change the curriculum or the external form of school government.

AMY E. TANNER.

The Lighted Lamp, by C. HANFORD HENDERSON. Houghton, Mifflin Co., 1908. 418 p.

This is the account of the awakening of Robert Pendexter's soul, when he was given the larger outlook upon life made possible by having a comfortable fortune left to him. Previous to this time he had been a clerk in a coffee and spice house, and had become nervously exhausted as well as mentally dulled by his monotonous life. He was sent to Europe to recover his health and on the steamer he comes into contact with various people who make him conscious of all that he has missed. His is, however, a receptive soul and he expands and blossoms in his warmer and more favorable environment. In especial he meets two women, one a frankly unspiritual girl who appeals to him physically, and the other a woman with tendencies towards occultism, who arouses in him vague longings after the unknown and mysterious. At first he believes himself in love with the former, but later learns that he is really in love with the latter, hopelessly as he believes. Accordingly he returns to this country without declaring his love and begins to study to be an architect, only to find as he goes on that he has not enough ability really to do anything. But at this point Fate steps in in the shape of a railroad accident and removes him as he heroically gives an old Irish woman his chance of escape.

The idea of the story is good, for nothing is so thrilling as the awakening of a soul, but, to put it very bluntly, it is a boresome process to watch as shown here. One realizes from the start that Robert has too little vitality to do anything and that there can never be intense excitement in any situation of which he is the centre.

AMY E. TANNER.

The Little Brown Brother, by STANLEY PORTAL HYATT. Holt & Co., N. Y. 329 p.

An interesting story of the administration of the Philippines by the United States. The writer has himself been in the Philippines and writes of the life and conditions he has actually seen. The point

which is made throughout the story is that the United States is making the worst possible mistake in giving votes and offices to the natives, who are either too ignorant to use the ballot, or if educated, are self-seeking, and oftentimes traitors to our country. He also believes that many of the facts of the situation in the Philippines are kept out of the papers and concealed from the people by the officials in charge in order to bolster up themselves and the administration in power.

AMY E. TANNER.

From Keel to Kite, by ISABEL HORNIBROOK. Lee & Shepard Co., Boston, 1908. 511 p.

The story of a Gloucester boy who has the ambition to become a naval architect but who is left penniless and alone with his living to make. Descriptions are given of shipyards, bank fishing and similar scenes, which abound in technical terms and sea slang to such an extent as to make them almost too difficult for the untrained landlubber to follow. Such things, however, would probably not disturb the average boy, who would rush with avidity to the descriptions of storms, wrecks and general catastrophe in which the book abounds.

AMY E. TANNER.

A Treatise on Facts or the Weight and Value of Evidence, by CHARLES C. MOORE. Edward Thompson Company, Northport, Long Island, N. Y., 1908. 2 Vols., 1612 p.

Seldom is a law book directly helpful to psychologists and teachers, but such is the case with "Moore on Facts". On the subject of memory alone the book contains 258 pages; and observation, attention, and other psychological topics are considered at length. The sources of error in testimony, defects in observation, illusions of memory, the influence of prejudice, and the like, of which the law courts furnish such numerous illustrations, are discussed at length.

From the point of view of psychology it would be easy to criticise this work. It gives, of course, what in a certain sense may be called amateur psychology, but it is not intended as a work on psychology. It is, nevertheless, a contribution to this subject, and it would be welcome, if for no other reason, because it shows the limitations of psychology based on observation and introspection alone, and it enables one to estimate the contribution of scientific psychology. But it is valuable also because of its suggestiveness and because it shows the psychology of everyday observation. So far as this source of psychological knowledge is concerned, many of the great lawyers have been experts, and a compilation of the results of their observation is extremely suggestive. Again, it furnishes valuable illustrations that cannot fail to be helpful in the teaching of elementary psychology. And, finally, it should suggest to psychologists *vom Fach* important problems for investigation.

For pedagogy the contribution is perhaps equally great. Teachers, like lawyers, must base their practice largely on the fundamental psychology of everyday life, as regards perception, attention, memory, and association. If teaching, like law, were a fully developed profession, pedagogy would probably have its own collection of psychological lore based upon the observation of thousands of teachers and illustrated by definite concrete examples from the schoolroom. Lacking this it can well profit by the collection of everyday psychological wisdom by the members of the legal profession. This contribution is no less valuable so far as it goes because it is not meant to take the place of scientific psychology. By this, however, the reviewer does not mean that the author ignores scientific psychology. On the contrary the book is probably unique in English law literature in its copious quo-

tations from psychologists. Not only the older writers, but James, Ebbinghaus, G. Stanley Hall, Claparède, Kuhlmann, Münsterberg, Thorndike, and others among present day psychologists are quoted; and the modern German studies of testimony, the contributions to the *Psychologie der Aussage*, although they might well be given more space, are referred to by citations from Claparède and Kuhlmann.

As a contribution to the literature of law we are not concerned with this work; but the industry of the author is suggested by the fact that the mere table of cases referred to occupies 116 pages, the chapters devoted to memory alone contain more than 2,000 citations of cases, and the quotations and footnotes in almost every section are numerous.

WM. H. BURNHAM.

The Dark Corner. By ZACH MCGHEE. The Grafton Press, New York, 1908. 206 p.

Readers of this journal will remember Zach McGhee, the author of this book, as the investigator who contributed the "Study in the Play Life of Some South Carolina Children," *Ped. Sem.*, Vol. 7, Dec., 1900. Although the author has gone into journalism and the writing of fiction, he has not lost his interest in education. The book before us is an account of educational reform in a southern state. While the scene is apparently South Carolina, there are probably many dark corners in the South where in recent years educational reform along similar lines has been effected. The book portrays a tendency not uncommon in America outside the South—the tendency to magnify form and forget the substance of education, to multiply students and buildings, courses of study, and degrees, and alumni, to the neglect of education and of scholarship, and to offset lack of competent teachers and thorough instruction by examinations and exhibitions and commencements. As a satire on all this the book has more than local interest.

The Hollisville Collegiate Military Institute, Professor Jefferson Marquinius Tilson, President, with its huge investment in plans, its multitude of courses, its heterogeneous students; and the famous alumni of this college, among them Professor Bucephalus Brown, LL. D., who learnedly instructed his pupils that "it is because moisture is not frequently precipitated in the desert of Sarah that it is dry there," and who carefully corrected their pronunciation when they said "joggerfy" instead of "jography;" the eloquent orator who maintained that "education is the paladium of our liberties and the grand pandimonium of our civilization," and the student of the Hollisville College, who, having studied oratory for a whole week, and mastered the principles of the Latin language so far as is involved in *mensa* and *mensae*, after learning the Greek alphabet down to Kappa, and studying physiology, finding that he could not attain the highest honors in the department of commerce without learning the multiplication table, felt a divine call to teach and preach and to this end set about studying pedagogy, psychology and theology, and, finally, refused to go to Yale since it would be a reflection upon his Alma Mater—all these may be caricatures, and yet they suggest vividly enough their originals.

The style of the book is simple and sincere, its humor wholesome, and, although some of the great problems of education are inevitably met, no attempt is made at an ultimate solution. The book is dedicated to the teaching profession, to the "men of talent, strength, energy and culture" who sacrifice themselves "to pursue lives of toil, poverty and obscurity, that they may brighten the minds, ennoble the souls, and increase the opportunities of other men's children;" and

to them it should appeal; for the author has made a contribution both to the history and to the literature of education.

WM. H. BURNHAM.

Die Wirkung von Suggestivfragen. von OTTO LIPMANN. Zeitschrift für Angewandte Psychologie und psychologische Sammelforschung. Band 1, Heft 1/2, 4/5, 6; Band 2, Heft 3.

This article, running through four numbers of the periodical mentioned, is an exhaustive study of suggestive questions. Lipmann performed experiments on 1,500 persons of both sexes, from all grades of school, university students, merchants and artisans, and compared his results with those of other investigators along this line,—Stern, Binet, Kosog, Rodenwaldt, Ranschburg, Oppenheim, and Seashore.

He defines suggestive questions as those questions which presuppose a certain answer, and he studies this suggestive effect as dependent upon—

1. The formulation of the question.
2. The personality of the questioner.
3. The personality of the one questioned.
4. The content of the question.

Lipmann investigated the subject in a very complete way through the suggestibility of individual question forms as given by Stern distinguishing in his experiments between (a) ordinary or non-suggestive questions. (b) somewhat suggestive questions, and (c) strongly suggestive questions. The method was that of questioning the subjects separately about the details of a simple picture of a peasant's room.

The author studied the dependence of the suggestivity of a question upon its content, upon ideational types, attention, grade and age, mental development, intelligence, and sex. He discusses the influence of suggestive questions upon testimony, citing the method of "*Thatbestand-diagnostik.*" and gives some practical hints concerning the dangers and use of this form of questioning. Briefly summarized, his results are the following:

1. Dependence of suggestibility upon the form of the question; expectant and false hypothetical questions are strongly suggestive; yes-no questions are rather suggestive; definite questions are much less suggestive.
2. Dependence of suggestivity upon the content of the question:
   a. Suggestion may be of what is complementary or of a change. Most subjects are more suggestible to change.
   b. A question which refers to something necessary has more suggestive effect than one referring to something unnecessary.
   c. The suggestibility of a question depends upon the accuracy and vividness of the memory picture.
3. Dependence of suggestibility upon the person questioned:
   a. The degree of mental development is more determinative than age; in general, suggestibility decreases as mental development advances.
   b. Environment has a great deal to do with suggestibility.
   c. A thorough-going sex difference does not exist.
   d. Visual, and types in which the visual predominates are least suggestible.
   e. The attitude of the one questioned to the questioner is important.

Although Lipmann makes no pedagogical application, the educational significance of this investigation will not escape those who have observed the great suggestibility of children of all ages; and this study gives us important hints in regard to the use and abuse of questions in school work.

LUCETTA CRUM.

1. *The Lending Department. Work of the Registration Desk.* By SARA C. VAN DE CARR.

2. *Course of Study for Normal School Pupils in the Use of a Library.* By MARJARY L. GILSON.

These little volumes are numbers one and two respectively of a series on modern American Library Economy issued under the supervision of John Cotton Dana, the well-known librarian of Newark, New Jersey. Number one, Administration of Loan Departments, is very technical and will not have much interest except to those connected with libraries, but the 'Course of Study for Normal School Pupils' is a book that cannot fail to interest teachers. The excellent work done at the Newark Public Library in the way of helping all classes of people to use books is too well known to need comment here. Mr. Dana evidently feels that if the teachers themselves knew a little more about the possibilities of the library the connection between school and library might be much closer than it is. At any rate, the book is evidently written to bring about closer relations between the schools and the library. It is divided into twelve lessons, among which we notice the selection and discussion of children's books, both for reading and for reference, and "Some things a teacher should know about books and libraries." We hear a great deal about the close relations existing between libraries and schools but fear that most of it is still merely on paper, and Mr. Dana's little book, if it brings about a real co-operation between the two, will be one of the most valuable contributions he has yet made; and that is saying a great deal. LOUIS N. WILSON.

Industrial Efficiency. A comparative study of industrial life in England, Germany and America. By ARTHUR SHADWELL. 2 volumes. Longmans, Green & Co., London, 1906. 346+488 p.

This book has been often reviewed and has been designated by such phrases as epoch-making, monumental, etc., and it is certain that no writer in recent years has taken such a broad view of industrial life and training in various civilized lands or has written so subjectively upon this vital subject. It was inspired by the growing pressure of international competition in industry which the author thinks is likely to be the warfare of the future. It examines the conditions under which industries are carried on in several countries and is evidently the result of long, patient study. In the second volume the author's method is to select sample towns and give a comprehensive view with statistics and other data of their industries. The scope of the work can be indicated by the titles of the leading chapters, which are industrial conditions in England, in Germany, in America, factory laws and conditions, houses, wages, workmen's insurance, benevolent institutions, cost of living, physical and social conditions, trades unions and industrial disputes, pauperism and thrift, elementary education and technical education. The author believes that it is precisely the industrial communities, and in these, the pick of the industrial population that is now most defective in all cases under consideration, and this to him makes the gravity of the present situation. His purpose in writing is to bring home to those who read his book a sense of the urgency of the needs to check these tendencies.

The Doll Book, by LAURA B. STARR. Outing Publishing Co., New York, 1908. 238 p.

This book is an attractive and interesting one with several score of illustrations. Its range can be understood from the headings of some of its chief chapters, viz.: the antiquity and etymology of the doll,

historic dolls, puppets, marionettes, fashion, oriental, Japanese, supernatural dolls, doll collections, dolls of the nativity, fetish dolls, their manufacture, curiosities, customs and tales, Indian, home-made dolls, and their educational value. In a sense this book may be said "to meet a long-felt need." It is rather singular that, while there have been a few memoirs and many popular newspaper articles on the doll, there has been nothing that was comprehensive of all this material, including the educational value of dolls. The writer has made good use of the study of dolls by Hall and Ellis some years ago, although acquaintance with this article seems to have been made after most of the book was written; and we are rather at a loss to understand the author's statement that the scope of that memoir "is in the main somewhat apart from the object of this book." The writer has a wholesome appreciation of the educational possibilities of the study of dolls, and perhaps we ought not to express disappointment that these possibilities are not very elaborately developed in the appetizing but all too brief chapter on this aspect of the subject. Certainly all teachers and parents cannot fail to be greatly interested and grateful to Miss Starr for her book.

Modern Methods for Teachers, by CHARLES C. BOYER. J. N. Lippincott Co., Philadelphia, 1908. 345 p.

Modern methods of teaching are an evolution from ancient Greece and Rome and heaven knows where! Till the art of Gutenberg (1456), teaching was mainly oral, but now methods have been radically modified. In the first part, entitled the principles of teaching, the author discusses the nature of education, mind, knowledge, principles of instruction; in the second part, entitled methods of culture, he gives a chapter each to mental and physical culture; and in the third part, entitled methods of instruction, which occupies the greater part of the book, from page 83-331, he treats of fourteen topics, viz., object lessons, reading, writing, spelling, composition, grammar, arithmetic, geography, history, drawing, manual training, agriculture, physiology and singing. The author's reading has mostly been in the field of books especially for teachers. According to the method and standpoint by which books of this class are usually reviewed it is to be called a good book and yet ——.

A History of Dancing, by REGINALD ST. JOHNSTON. Simpkin, Marshall, Hamilton, Kent, & Co., London, 1906. 193 p.

This author treats of the muse of dancing in ancient mythology and her relations to other arts, dancing as a religious ceremony, ancient forms in Greece, Italy, and the East, early forms of English dancing, allegorical dances among primitive races, quaint dances of to-day, dancing as a social pastime, stage dancing, the ballet, a short history of the world s dancers. It contains a rather good bibliography and four illustrations.

How to Dance the Revived Ancient Dances, by ARDEN HOLT. Horace Cox, London, 1907. 158 p.

This is an interesting treatise. It tells us how to take the steps needful to carry out the revived, ancient dances and then describes masques, the pavane, the gailliard, the canaries, the courante, the passe-pied, siciliano, chacone, allemands, rigaudon, saraband, minuet, gavotte, morris dance, hornpipe, tranchmore, volta, and many others. The author knows his subject and writes in a very interesting way.

Schafft frohe Jugend! von HENCK-TRAUDT. Thüringer Verlage-Anstalt W. Jena, 1904. 148 p.

In September, 1901, the author visited the *Volkschule* near Kassel

which profoundly impressed him as in many respects almost ideal. The children were always occupied, and in most studies were able to use their hands. The attitude of the children, their joyousness, spontaneity, healthfulness and unconsciousness also seemed almost ideal. The visit prompted this book, which is an idealization of this school. Its chapter heads hardly do justice to its animated content. They are not words; but things; art in the school, religion versus words; instruction in things; the abolition of the primer; opposition to drill in reckoning; writing; charts, etc. Very interesting is the author's analysis of the field of knowledge of the children, in which he attempts to determine what animals, plants, minerals, local things, events and places they knew. Then the ability they brought to school to count, know colors, their religious ideals, the proportions of definite natural objects that they had seen and knew. The conclusion was that children come to school with a large number of usable concepts and with an interest which is serviceable but with few usable notions about religion. The author's general conclusion is that the children might, with a little effort on their parents' part, be provided with the preliminary knowledge necessary for school work.

American Playgrounds; their construction, equipment, maintenance and utility. Edited by Everett B. Mero. American Gymnasia Co., Boston. 270 p.

This is a compilation of serviceable information concerning what has been and should be done to provide suitable recreation and physical training by approved modern methods. It is designed as a manual for supervisors, instructors, committees etc., and is largely made up of quotations. The chief topics are why and how to provide for general exercise and recreation. Here the author teaches what the playground should be and have, its supervision, instructors, etc. The second topic is entitled organization, construction and equipment, which deals with apparatus, playgrounds in waste places, recreation centres, control, etc. The third part is entitled special points for supervisors and instructors and deals with discipline and various suggestions concerning programmes, methods, etc. The fourth is entitled games and exercises for children and grown-ups, and treats of marching, athletics, team games, grading of games, combative and competitive feats, interesting big brothers and relatives, sand gardens, dancing, swimming, pyramids and tumbling, school gardens, etc. Another section is devoted to the Chicago method as shown in the South Park system. And finally a miscellaneous section treats of recreations organized in country and village, how to inaugurate local movements, three ages in the play period, history of playgrounds and their social conditions. In an appendix made up of quotations and extracts, opinions of various authors are cited. The book is copiously illustrated, and despite the heterogeneous type employed for different articles, and its not entirely satisfactory get-up, it is nevertheless a work of very great value.

Mind and Work, by LUTHER H. GULICK. Doubleday, Page & Co., New York, 1908. 201 p.

These are more or less informal talks given on various occasions and later most of them were repeated as a part of the lecture course in a school of pedagogy and many have been printed elsewhere. The topics are vital, such as The habit of success, What is real, Resolutions good and bad, "Mental effects of a flat-top desk, Thinking that arrives, Put it on paper, Management of feelings, Time to quit, Fatigue and character, Will fatigue, Rest the will, Will economy, Need of adequate work, Handicaps, Spirit of the game." In the best

sense of the word these talks are homely. There are no authorities cited, no references or footnotes, and very few names of other people's works are mentioned. The style is snappy and catchy. To get the best out of children we must believe in them, give them the work they can do and recognize their success. Ultimate reality tends toward good more than toward evil, hence we should be optimists. We can each choose our own best atmosphere. The world is what we choose to make it. We can select pain or happiness. We must not be fuzzy-minded but determined to do definite things. The flat-top desk is good because it keeps one's work in sight so that a man must finish it off day by day and start with a clean one every morning. Big ideas in little minds are dangerous. We must choose first those things that are of most importance and work with perspective. Things that are put down in written words are made objective and more real. We can control the feelings at least indirectly or, at any rate, avoid painful crises. The time to quit work is when we lose self-control and effectiveness and are in sight of irritable weakness. Fatigues lessens our ability. We should make important decisions when the mind is fresh and then is the time to do the hardest work. The question of fatigue is one of interest and of attitude toward life. Each must find something that he loves to do and then go at it with his might. This means balance, steadiness, self-control, finding one's job. By far the best chapter in the book is entitled "Handicaps," and tells how much has been and can be accomplished by those who have certain defects and diseases, or who have worked in poverty or in other painful circumstances.

Standards in Education, by ARTHUR HENRY CHAMBERLAIN. American Book Company, N. Y., 1908. 265 p.

This book "contains a brief discussion of the crucial factors in modern, particularly in elementary education," including its aims, curriculum, method. The chapters are entitled aim of education, the elementary curriculum, its motive and content, industrial training, its aim and scope, the meaning of correlation; the basis of ethical training, the significance of habit, the curriculum in operation, considered in preparation at home and at school, recitation processes, including selection of material, development of a plan, assignment of lessons, how to study, hearing the lesson versus teaching; training, professional growth and recompense of the teacher, a chapter which deals with knowledge of the subject matter, value of psychology, attitude of the prospective teacher and ability to teach, the teacher's reading, associates, contact with the issues of life, reading circles, æsthetic feelings, qualities, etc. To each chapter is appended a number of references and there are inserted running topics which make it all easy reading. There are epitomes, too, to aid in this direction.

Personality in Education, by JAMES P. CONOVER. Moffat, Yard & Co., N. Y., 1908. 265 p.

This work consists of twelve chapters entitled as follows,—the teacher, child, nursery, school, some questions of expense, the playground, discipline, class, class work, examinations, religion in the school, college. The essays in this book are observations of a workman recorded from time to time amidst the noise and business of the shop.

Impressions of American Education in 1908, by SARA A. BURSTALL. Longmans, Green & Co., New York, 1909. 329 p.

The author is head mistress of the Manchester (England) high school for girls, and here records her personal impressions gathered

in a hasty educational tour which she made during one term's leave of absence in this country. Of the many books of the kind, this is one of the most voluminous considering the time spent here. There is indeed very little in it that will interest American teachers, for the author simply followed the usual route of the English teacher in this country, diverging very slightly from it. She looked over New York from the kindergarten to Columbia University, took a peep at Philadelphia, did Boston and Cambridge, then proceeded to Chicago and St. Louis. On this basis she describes high and private schools, colleges, universities, methods of teaching in general, the place of woman in American education, and then the teaching of history, home economics, commerce, industry, etc. She wishes England could believe in education as heartily as we do, and is very fond of comparing things English and American. It is perhaps inevitable that a book written thus should miss a great many things and men that lie most directly in the lines of her interest; and that she should say to her own countrymen what has been said to them many, many times of late, that her information should sometimes be incorrect and some of the things she describes superseded. Doubtless the book will have its use in England, but it should be distinctly regarded as random notes of the first impressions of a hasty visitor, and is very far from giving those who know nothing of the American system a just and true perception of the forces now active in the educational field. Indeed, one can often detect the sources of her information from the character of it.

The Education of an Artist, by C. Lewis Hind. Adam and Charles Black, London, 1906. 256 p.

This work contains ninety-one full-page illustrations. It sets forth the art education of Claud Williamson Shaw, how at the age of thirty certain glimmering suspicions that life is a larger tapestry than the pattern woven by the author of "Self-help," broke into flame; how this was fanned by an artist; and how he came to choose to express his temperament by painting, his studies in Paris, and travels on the Continent; and how in the end he found that his education was but just beginning, and that the true mode of expression for him was literature and not painting. A number of the pictures that impressed him most are reproduced.

In Viking Land. Norway: its Peoples, its Fjords and its Fjelds, by W. S. Monroe. L. C. Page & Co., Boston, 1908. 322 p.

This book is the result of two vacation trips to Norway and of rather wide reading of the extensive literature of the country. The author's aim has been to give to prospective tourists some notion of the benefits to be derived from a visit to Norway and to inform readers who prefer, or are forced by circumstances, to travel within the covers of a book. In a country so rich in scenery, an author is tempted to devote his book to physiographic forms and forces, as indeed most writers have done. The present volume, however, gives prominence to matters of human interest. The Viking age is strongly emphasized and enough historical material is given to explain the present condition of Norway. Thus only one chapter is given to description, one each to the Viking age; the old Norse kings; union with Denmark and Sweden; Haakon VII and the new kingdom; the people of Norway; the Laps and polar regions; the Norse religion old and new; education in Norway; highways, railways and waterways; farm life and agriculture; forests, fisheries and commerce; the fjords of the west coast; the fjelds and mountain valleys; Trondhjem, its saint and its cathedral; Bergen and the Hanseatic League; Christiania—a mod-

ern capital; Norse letters and Henrik Ibsen; folk music and Edvard Grieg; paintings, sculpture and architecture. The work is illustrated by many full-page photographs and an appendix contains hints to travellers, and an interesting but not too comprehensive bibliography. The book is rather elegantly gotten up and is well adapted for a Christmas present.

Principles of Secondary Education. A text-book. Volume 2, Processes of Instruction, by CHARLES DE GARMO. Macmillan Co., New York, 1908. 200 p.

In this second volume the author treats the processes of instruction as the first treated of the studies. A third is to be devoted to the processes of training. The chief captions here are under A., the scientific basis for high school methods, the acquisition of facts, their meaning and explanation, the forms of solution for the problems. Under B., scientific methods in high school instruction are treated, the educational status of the high school student, the inductive and the deductive approach, the process of application in inductive and deductive combination and variations. As a whole, the book well sustains the interest of the first volume and is marked by the author's well-known thoroughness and lucidity.

Health and Happiness, by SAMUEL FALLOWS. McClurg & Co., Chicago, 1908. 2nd ed. 283 p.

This book, the author tells us, is a response to a call of duty. It was written during brief pauses in crowded hours of a busy life to answer needs made apparent in the sufferings of hundreds who came seeking help at St. Paul's church. It omits detailed descriptions of disease and technical methods of treatment. The topics treated are, the essence and power of prayer; faith, a dynamic force; the presence and power of God; the power of love; self-control; doubt; physician and clergyman; the clergyman's opportunity; consciousness and subconsciousness; suggestion; auto-suggestion; unused powers; the mission of prayer; therapeutic training of the emotions; overcoming worry; fear and its antidote; the conquest of anger; cheerfulness a tonic; watchwords of right living; a litany of health; scripture words; scripture prayers.

Readings in Modern European History. Volume I, The Eighteenth Century: the French Revolution and the Napoleonic Period, by JAMES HARVEY ROBINSON and CHARLES A. BEARD. Ginn & Co., n. d., Boston. 410 p.

A historic manual cannot give a very lively sense of the reality of the events, conditions and motives with which it deals. It is necessary to give the text-book a background and atmosphere to bring the student nearer to living springs of knowledge. This is the first of two volumes of selections designed to meet this end. This volume is devoted to the eighteenth century, the French revolution and the Napoleonic period.

Die Elemente der Erziehungs-und Unterrichtslehre; auf Grund der Psychologie und der Philosophie der Gegenwart, von DR. PAUL BARTH. Leipzig, Barth, 1908. 584 p. 2nd ed.

This is a second, enlarged edition of a work first published in 1906. Under general education, the author treats the culture of the will and feelings; under instruction, the culture of the soul, laying stress upon object lessons, attention, memory, thought, the programme and curriculum. Under special training, didactics, gymnastics, discipline and the pedagogy of different topics are taught, viz., religion, his-

tory, the mother-tongue, foreign languages, technical and humanistic skills like reading and writing, artistic work, viz., declamation and singing, and natural realistic knowledge, natural history, mathematics, drawing and hand work.

Text-book of School and Class Management. Theory and Practice. By FELIX ARNOLD. Macmillan Co., New York, 1908. 409 p.

Education, we are told, is "still in the age of lean kine and management is one of the leanest." For the practical aspects of school management the author has depended mainly on his own experience and that of progressive teachers whom he knows. Such philosophy as is presented is largely based on Baldwin. The first part deals with the principal and the teacher together with the co-operation between them in instruction, discipline and supervision; the second part, with the teacher and the child including natural sanction, kinds, general and special development of conduct. The book cannot fail to be of interest and of service.

Die Entstehung der ersten Wortbedeutungen beim Kinde, von ERNST MEUMANN. Leipzig, Engelmann Wilhelm, 1908. 100 p. 2d ed.

This is the second edition of a work previously reviewed in this *Journal* and the author has added even more if possible to its very high value.

John Jasper, by WILLIAM E. HATCHER. Fleming H. Revell Co., New York. 183 p.

Every reader must be very grateful to the author of this work, who is himself an LL. D., who has studied this famous, this "unmatched negro preacher and philosopher," from his conversion to his recent death at the age of some eighty years. He is chiefly and widely known because of his famous sermon proving from the scripture that the earth is flat and the sun goes around it, but he was probably the greatest religious orator the colored race has ever produced. His vivid imagination, his marvellous gifts of dialect, his pure, deep, strong African feeling, his impressive presence, his integrity, his absolute sincerity, make him a marvellous example of a unique type of believer. Many extracts from his sermons are given in dialect as he preached them, and the vividness of his diction, the passionate abandon to the sense of reality of everything he described in the lives of Abraham, Moses, Jacob, Daniel, Jesus and the Apostles cannot fail to move every one even in the dead form of print. Probably few orators have ever had such immediate magnetic effect upon their hearers.

Die Seelenwunden des Kulturmenschen, von DR. KARL OETKER. H. Zimmerman, Zürich, 1908. 214 p.

This work, the full title of which is "The Wounds of the Souls of Cultivated Men Regarded from the Standpoint of Modern Psychology and Nervous Hygiene, as the basis of a Scientific Religion", is itself remarkable. The author has travelled and observed and has thought in an original not to say unique way upon many topics which would hardly be suggested by the title and make it hard to classify. The book has no index and seems to centre in certain aphorisms like the following:—Consciousness is the introspective side of any cosmic unity; Nothing ethical or æsthetic can be at variance with the natural culture of body or soul; We are not adjusted psychically to the very sudden changes of the conditions which modern life has brought; We must develop psychic surgery wherever psychic wounds will not heal of themselves; The sexual question can only be solved by woman

and not by man; Entire continence involves for normal persons great torment and is therefore not justifiable from the standpoint of psychic hygiene.

The American As He Is, by NICHOLAS MURRAY BUTLER. Macmillan Co., New York, 1908. 104 p.

These are lectures, apparently three in number, delivered by the author at the University of Copenhagen, in which he seeks to set forth some aspects of American life and to draw in large lines a picture of that part of present day civilization which the world knows as American. We are referred for genuine understanding to Alexander Hamilton, Abraham Lincoln and Ralph Waldo Emerson. The three sections are headed, 1. The American as a political type; 2. The American apart from his government; and 3. The American and the intellectual life. Perhaps this volume was worth printing here; it is more certain that it did good where it was delivered.

The Precinct of Religion in the Culture of Humanity, by CHARLES GRAY SHAW. Swan Sonnenschein & Co., London, 1908. 279 p.

This is the substance of lectures given in the Graduate School of New York in a course entitled "The philosophy of religion." The spirit in which the "precinct of religion has been examined is not that of the older noumenalism, still less that of the newer phenomenalism; both metaphysics and psychology are here set aside for the sake of a humanism which seems best adapted to defining the essence of human worship." After a historic introduction, part first on the essence of religion treats of religion, philosophy and science in general, of the limitations of religion, the religious consciousness, religion as self-affirmation of the soul. Part two treats first of the religious view of the world, viz., religion as knowledge and as æsthetic intuition; and second, under the religious interpretation of life, of religion and ethics and rights. Part three deals with the reality of religion, its origin, development, world forms and revelation. Part four deals with the religious world-order, viz., religious value of theism, the affirmation of absolute life, unity of finite and infinite.

Die Stetigkeit im Kulturwandel. Eine soziologische Studie, von ALFRED VIERKANDT. Leipzig, Dunder & Humblot, 1908. 209 p.

After an introduction in the historical part the author treats of domestic economy, custom, language, political life, religion and myth, art, science and the physiognomy of modern culture generally. In the psychological part, which is most interesting, the historical structure of consciousness is considered. Two types are distinguished, namely, the persistent and the adaptive. The effects of practice and the restricted application of the idea to the animal world are treated. Then the development of the psychic life of individuals is described and we are told how changes of quality and development rest upon summation, perception and memory, the process of thought and conviction and the evolution of worths and values. Trade and creative activities are next passed in view. In the third, the sociological part, the writer treats the mechanism of changes of culture, how it persists, evolves various types, and the process of becoming accustomed, the nature of need, the dominance of individuals, the development of novelty, the final causes of changes of culture, its irrational character and the essence of what is historical. In conclusion he discusses the significance of what is trivial and how it is elemental for development and is maximized.

Das nächste Geschlecht, von HANS WEGENER. Töpelmann, Giessen, 1909. 190 p.

This is a book designed to help parents in educating themselves, and discusses the sexual problem in relation to the education of children. The captions are on the sexual power, bride and groom, man and wife, the child, the sacred hour, mature youth. The book makes little pretentions to scientific value but seems to be sane and sensible although perhaps a little too hortatory.

Between Man and Boy, by QUILBERT. Watts & Co., London, 1908. 149 p.

These are called sermons though they have never been delivered. The book, we are told, "should not be put into the hands of boys whose parents think it wise to rely on Orthodox Christianity as the only sound foundation for moral principles; it is addressed to those whose training or temperament makes it likely that they need other incentives." The following topics are dealt with; the golden rule, home, reading, openness and reserve, sex, individuality, bores, prigs and the seriousness of things, man's place in the world of nature, your place in the world of men, manliness, choice of profession, money.

Home Occupations for Boys and Girls, by BERTHA JOHNSON, assisted by FANNY CHAPIN. George W. Jacobs & Co., Phil., 1908. 191 p.

The plan of this book has special reference to the mother when her child does n't know what to do and appeals to her. In this way it treats the child's library, the basket, festive occasions, plays and games, dolls and doll houses, the paint box, the sewing-basket, the scrapbook, etc. Scores of occupations for young children are briefly described together with the apparatus for making them chiefly from a kindergarten standpoint, but the book is valuable to all interested in plays and games as well as to mothers.

Questions in General and Educational Psychology, by GUY MONTROSE WHIPPLE. C. W. Bardeen, Syracuse, 1908. 107 p. (Cornell Study Bulletins for Teachers, No. 3.)

This work is divided into the following sixteen parts,—1. The nature, scope, problems and subdivisions of psychology and their relation to education; 2. Psycho-physical organism, mind and body, including the structure and function of neurones and nerve centres; 3. Inherited forms of action, heredity, temperament, reflexes, instincts, capacities, etc.; 4. Acquired forms of response, intelligence, deductive processes, plasticity, learning, habit forming; 5. Sensory mechanism and sensation, each of which is given a special section; 6. The motor mechanism and movement, including evolution and character; 7. General principles of mental elaboration and organization, images, attention, interest; 8. Perception and observation, etc.; 9. Memory; 10. Imagination; 11. Concepts and language; 12. Judgment and apperception; 13. Affective processes of feeling and emotion; 14. Formal discipline or general mental training; 15. Abnormal and anomalous processes, sleep, hypnotism, insanity; 16. The New York state examinations. After a list of references, to which a single chapter is devoted, the questions begin. They seem to be well selected and must be of great service for those contemplating examination.

Education and National Character, by HENRY CHURCHILL KING, FRANCIS GREENWOOD PEABODY, LYMAN ABBOTT, WASHINGTON GLADDEN and others. Religious Education Association, Chicago, 1908. 319 p.

This is a collection of essays that were read at the fifth general con-

vention of the Religious Education Association held at Washington, D. C., February 11-13, 1908. Some of these titles are: Fraternal order and moral education, by C. A. Barnes; Fraternal education, by J. H. Burtt; Progress in the Sunday school, by F. D. Elmer; Suggestions for a curriculum of religious education during adolescence from fourteen to twenty-five, by C. W. Votaw; The reason why college men do not go into the ministry, by Shailer Matthews; Religious psychology and education, by C. A. Coe; Method of moral training in the schools of France, by G. E. Myers; and in those of Germany, by A. W. Patten; The training of ministers and physicians for the negro race, by W. P. Thirkield; The problem of religious instruction in the state university, by F. W. Kelsey; Enlarging ideals in morals and Religion, by H. C. King; The universities and the social consciousness, by F. G. Peabody.

Report on the Teaching of English in the United States, by M. Atkinson Williams. C. W. Bardeen, Syracuse, 1908. 88 p.

This little volume is the record of an interesting half year's work written for the University of London under the conditions of the Gilchrist Travelling Studentship. The book treats of the scope of English work, with general remarks on methods used; training in spoken English; training in written work; reading and literary courses in high and normal schools; the connection between the public school and the public library. The appendix gives a list of the educational institutions visited which includes between three and four score schools of various grades, public, private, normal, also colleges and universities. Some lessons that particularly pleased the author are given with perhaps rather more detail than a due regard for proportion would justify in so small a work.

Report of the Commissioner of Education for the Year Ended June 30, 1907. Vol. II. Washington, Government Printing Office, 1908. pp. 523-1214.

We congratulate the Commissioner of Education in bringing out the second volume of his report down to this year which deals in characteristic fashion with statistics of state common school systems, city systems, universities, colleges, technological schools, agricultural and mechanical colleges, professional schools, normal schools, secondary schools, manual and industrial training, commercial and business schools, schools for training of professional nurses, schools for the colored race, reform schools, schools for defective classes. While we could not get on without the tables contained in this report, the question may be raised whether it would be enough to publish some of these biennially and devote the force of the Bureau and the space given to these statistics to other more useful topics. Many of these tables show changes from year to year that are so slight that it would seem as though a biennial report would have exactly the same value so far as showing general tendencies are concerned, although, of course, the report would have somewhat less value as an office reference book for addresses, etc.

Journal of Proceedings and Addresses of the Forty-sixth Annual Meeting of the National Education Association, held at Cleveland, Ohio, June 29-July 3, 1908. Published by the Association, Winona, Michigan, 1908. 1251 p.

It is more and more apparent that the real value of the proceedings of the N. E. A. lies in the work of the departments, while the general sessions are growing more and more formal and uninteresting. Miss Addams, Booker Washington, and President Van Hise always have something to say, but the quality of some of the other addresses in

the general sessions is far below the standard which this association ought to maintain. We miss here, too, any account of the alleged effort of a certain book company to control the organization, which was a theme far more actively and eagerly discussed, we are informed, outside the meetings than any other. This is a question in general far too grave to be settled by any vociferations of one or two officers of the association whose influence on it during the last few years at least, has been detrimental to its highest interests. As it is, the N. E. A. is made up of most but not all of the best men, women, and influences in the educational field; but there are also too many of each of these that are otherwise. The quality of the proceedings ought not to vary quite so widely. There are plenty of the very best and newest things sandwiched in with some of the most insipid and platitudinous, so that the reader of this volume has to be constantly wary and on the lookout both to find the good and to avoid wasting time on the bad. The able and excellent secretary of this association deserves the highest praise for the discharge of his own functions; and the heads of departments, of course, have a hard time in sifting the chaff from the wheat. One of them has described in graphic terms his alternations during the successive sessions under his care from elation, edification and great satisfaction to mortification and chagrin, as his programme proceeded, speaker by speaker, and day by day. The average teacher deems this inevitable. We do not think so, and are glad to learn that some of the best members are now striving to mature a better plan.

Annual Report of the Board of Regents of the Smithsonian Institution, 1907. Government Printing Office, Washington, D. C., 1908. 726 p.

It was to be hoped that, under the administration of the new secretary, Dr. C. D. Walcott, the essential things in the report would not be presented as appendixes to the very general statements of the secretary. The great bulk of the volume, as well as the value and interest, consists in these papers, some thirty in number, which are admirably selected. The reader cannot fail to notice, however, that anthropological themes are given less and applied science much greater prominence than in the reports under the previous régime.

Report of the Twenty-sixth Annual Meeting of the Lake Mohonk Conference of Friends of the Indian and other Dependent Peoples. Published by the Lake Mohonk Conference, 1908. 198 p.

The two sessions of the Mohonk Conference devoted to Indian affairs were characterized by more workers from the field and by wider range and greater freedom of utterance than the others. The very diverse views held by the different speakers gave great interest to the sessions; and the attendance was large, some Indians themselves being present. The third and fourth sessions were devoted to the Philippine Islands, the fifth to Porto Rico, and the last to Hawaii. On the whole, the volume is perhaps more interesting than any other.

Annual Report of the Department of Indian Affairs (of the Dominion of Canada) for the year ended March 31, 1908. S. E. Dawson, Ottawa, 1908. 460+166 p.

This is an interesting but ponderous book which gives us a very lucid picture of Indian affairs throughout the Dominion of Canada, describing each individual school, worker, tribe, etc. It cannot fail to be of interest to all who are concerned with the broader field of education; and when we reflect that Canada in its methods of treating Indians has succeeded in eliminating many of the difficulties and

sources of friction that have abounded here, it ought to be interesting to all connected with our own bureau.

Child Labor and Social Progress. Proceedings of the 4th Annual Meeting, Atlanta, Ga., April 2-5, 1908. Published by the National Child Labor Committee, 105 East 22nd St., New York, 1908. 180 p.

This volume contains sixteen chapters by as many different authors on different aspects of its general problem, and seventeen state and other reports from special organizations. The work that these committees are doing must, on the whole, commend itself most heartily to every friend of education and of children; but there is need, in the writer's opinion, at this point of a note of warning—neither the sentiment nor the effort of this society should contribute in the least degree to make the young or their parents distrust the wholesome influence of honest and sufficient work under conditions that are at once moral and hygienic. Not only should every child have duties but even the little ones should be made to recognize that they are parts of the home and must make themselves useful. All boys and girls alike should have duties, if not before then after school, and these should increase with age. The children of the poor should early be encouraged to earn money for the family fund. Even when it comes to street vending and to factory work, there are worse things for children. There are prosperous and healthy adults to-day who look back upon a youth of hard and grinding toil, not always under the most favorable conditions, by no means with regret. There are plenty of factories where there are duties which children of twelve years of age can render for four, six, or even more hours a day without serious detriment to their physical development and with great gain to their general *morale.* Some states have already crowded up the ages at which children can be employed in certain industries so that there is a year or two, or a larger gap, between the age at which children leave school and that at which they can find any employment.

Laboratory Exercises in Art Appreciation, by CHARLES DE GARMO. C. W. Bardeen, Syracuse, 1907. 36 p. (Cornell Study Bulletins for Teachers, No. 2.)

This bulletin aims to encourage and guide teachers and through them their pupils in quickening and enlarging their sense of the beautiful in nature and in pure and applied art. It also seeks to outline for this purpose the best available literature on the subject and to make the study concrete and interesting by means of laboratory work with pictures, first contemporary, then historical. Hence some of the salient topics are study clubs, books, laboratory exercises, use of material, the nature of beauty, the ideal and the real, nature and functions of art, æsthetic judgments of taste, references to literature, a study in gracefulness from Greek sculpture, a study in expression, a study of the universal in the particular, a study on the revelation of self.

The Foundations of Mathematics, by PAUL CARUS. Open Court Publishing Company, 1908. 137 p.

This work treats of the search for the foundations of geometry historically considered, the philosophical basis of mathematics and metageometry. The chief theme of the books is hyper- or non-euclidian space.

Kidnapped, by ROBERT LOUIS STEVENSON. Edited, with introduction and notes, by John Thompson Brown. Macmillan, N. Y., 1909. 271 p. (Macmillan's Pocket Classics.)

High School Course in Latin Composition, by CHARLES McCOY BAKER and ALEXANDER JAMES INGLIS. The Macmillan Company, New York, 1909. 464 p.

The Song-Primer—Made for the Children, by ALYS E. BENTLEY. A. S. Barnes & Co., New York, 1907. 59 p.

The Child World Primer, by ALYS E. BENTLEY and GENEVA R. JOHNSTON. A. S. Barnes & Co., New York, 1908. 128 p.

The Song Series. Book One, by ALYS E. BENTLEY. A. S. Barnes & Co., New York, 1908. 112 p.

NOTES

For many years, the San Francisco State Normal School, Frederick Burk, Ph. D., principal, has been evolving detailed curricula in different subjects in the form of bulletins, the series of bulletins having now reached its seventh number and together constituting more than five hundred large pages of printed matter. The bulletins in the different subjects have been evolved by the heads of the different departments: that in grammar by Principal Burk and Miss MacFadden, the latter of whom has also evolved a course of study in primary language and a handbook to the State series text. Lamson Ware edits an elementary course of study in literature, and a course of study or teacher's manual in mapped geography; F. Bunker a method of teaching geography by topical readings illustrated in the treatment of China; David Rhys Jones a course of study in primary arithmetic and a handbook to the State series text; A. B. Anderson a course in the study of history; the other courses we have not seen. It would of course require a very careful study to pronounce a critical opinion upon all this work. Suffice it to say that it is altogether an undertaking of great magnitude, importance and interest. The courses seem to have very different degrees of merit; some of them impress the writer of this note as hypermethodical, with rather more form than matter. The Normal School and its able principal should certainly be congratulated on this very elaborate, painstaking, and useful series.

The President of the United States has instructed the Commissioner of Education to aid in all appropriate ways within his power in the carrying out of the plans of the Chinese government for the education of students in America. The Chinese government purposes sending 100 students to America every year for four years, and a minimum of 50 students every year thereafter during the period of the indemnity payments by China to the United States, from 1909 to 1940.